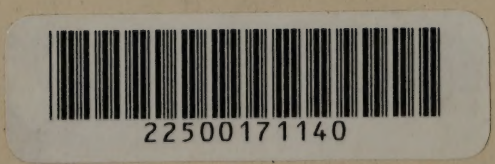
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Summary

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ANNUAL SUMMARY

OF

BIRTHS, DEATHS, AND CAUSES OF DEATH

IN

LONDON,

AND OTHER GREAT TOWNS,

1889.

PUBLISHED BY THE AUTHORITY OF THE REGISTRAR GENERAL OF BIRTHS, DEATHS, AND MARRIAGES IN ENGLAND.

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1890.

Price One Shilling and Sixpence.

REGISTRATION LONDON.*

Area.—The Area of Registration London is 77,410 acres or 121 square miles, including 2718 acres of tidal water; this is equal to 31,326 hectares, or 313 square kilometres. The length of the streets and roads, as returned in 1882, was more than 1600 miles. The Area of London being 121 square miles is equal to a square of 11 miles to the side.

Elevation.—The population of London resides at a mean elevation of 39 feet (11·9 metres) above Trinity high-water mark; the elevation varying from 11 feet (3·4 metres) below high-water mark in Plumstead Marshes, to 429 feet (131 metres) above high-water mark in Hampstead.

Houses.—At the Census in 1881 there were within this area 486,056 inhabited houses, containing an average of 7·9 persons to a house, closely corresponding with the proportions in 1861 and in 1871.

Annual Rateable Value.—The Annual Rateable Value of Property within Registration London in 1889, as assessed in accordance with the Valuation (Metropolis) Act, 1869, was 31,450,002*l.*† (For Annual Rateable Value of Greater London in 1881 and in 1889, see Table 7.)

Density (1889).—144 persons to a hectare; 58·3 persons to an acre; 37,288 to a square mile. (In these calculations no account is taken of tidal water.)

Annual Rate of Increase of Population per cent. . { 1861–71 . . 1·50 / 1871–81 . . 1·61

1889.

Population (Estimated to the middle of the year.)	Males . 2,049,580 / Females . 2,302,158	Persons.	4,351,738
Marriages			35,484
Persons Married			70,968
Annual Rate of Persons Married per 1000 of the Population			16·3
Births	Males . 67,067 / Females . 64,420	Persons.	131,487
Annual Rate of Births per 1000 of the Population			30·3
Deaths	Males . 38,749 / Females . 36,934	Persons.	75,683
Annual Rate of Mortality per 1000	Males . 19·0 / Females . 16·1	Persons.	17·4
Excess of Registered Births over Deaths			55,804
Estimated Increase of Population			69,370

* Registration London is co-extensive with the Administrative County of London except that the hamlet of Penge is excluded from Registration London, although forming part of the County of London.

† This information is derived from a return of the Gross and Rateable Value of Property in the Metropolis issued by the London County Council.

ANNUAL SUMMARY.

LONDON,

AND OTHER GREAT TOWNS,

1889.

General Register Office, Somerset House,
1st March 1890.

The Great Towns.

THE twenty-eight great towns of England and Wales that have a place in the Weekly Returns contained an estimated population of 9,555,406 persons in the middle of 1889. The births recorded among this population in the course of the 52 weeks ending on December 28th, 1889, were 295,156, and in the proportion of 31·0 per 1000 of the population in a fully completed year, the average rate for the preceding seven years having been 33·5. The deaths registered in the 52 weeks were 183,617, giving an annual rate of 19·3 per 1000, the average having been 21·0 in the seven preceding years.

The death-rate varied greatly in the different towns, ranging from 15·11 in Brighton and 16·37 in Derby, to 25·46 in Blackburn, 26·72 in Manchester, and 30·03 in Preston. Owing, however, to the great differences between one town and another, in regard to the age and sex distribution of their respective populations, these recorded death-rates require correction before they can be justly used for purposes of comparison; and factors were given in the Annual Summary for 1883 by which such correction can be made with approximate accuracy. Applying these factors we have the corrected rates, which are given in the second column of the following Table. In the third column the death-rate for all England and Wales has been taken as 1000, and the corrected rate in each town has been reduced to a figure comparable with that standard. That third column may be read as follows:—After making approximate correction for differences of age and sex distribution, the same number of living persons that gave 1000 deaths in England and Wales in 1889 gave 872 deaths in Brighton, 954 deaths in Derby, &c. &c., and 1827 deaths in Preston.

In regard, however, to all these rates, it is to be observed that at a distance of eight years from the last enumeration, estimates of population, based on the hypothesis that the rate of growth in the last intercensa period has been since maintained, are likely to be more or less inaccurate.

RECORDED and CORRECTED DEATH-RATES per 1000 in 28 Great Towns in 1889.

TOWNS, in the order of their Corrected Death-rates.	Recorded Death-rate.	Corrected Death-rate.	Comparative Mortality Figure.
Cols.	1.	2.	3.
ENGLAND AND WALES -	17·85	17·85	1000
ENGLAND AND WALES LESS THE 28 TOWNS -	17·15	16·77	939
28 TOWNS -	19·28	20·55	1151
Brighton - - - -	15·11	15·56	872
Derby - - - -	16·37	17·03	954
Norwich - - - -	18·38	17·58	985
Leicester - - - -	16·93	17·73	993
Nottingham - - -	16·99	18·01	1009
Bristol - - - -	17·60	18·22	1021
London - - - -	17·45	18·52	1038
Portsmouth - - -	18·11	18·66	1045
Birkenhead - - -	17·81	19·05	1067
Birmingham - - -	18·72	19·96	1118
Huddersfield - - -	18·83	20·68	1159
Hull - - - -	20·25	20·89	1170
Bradford - - - -	19·17	21·17	1186
Cardiff - - - -	19·51	21·17	1186
Wolverhampton - -	20·63	21·27	1192
Salford - - - -	20·48	22·29	1249
Sheffield - - - -	20·86	22·43	1257
Oldham - - - -	20·44	22·68	1271
Halifax - - - -	21·56	23·42	1312
Leeds - - - -	22·07	23·59	1322
Liverpool - - -	21·58	23·63	1327
Sunderland - - -	22·87	23·81	1334
Bolton - - - -	22·02	24·13	1352
Plymouth - - -	25·19	24·95	1398
Newcastle - - -	25·19	26·66	1494
Blackburn - - -	25·46	27·75	1555
Manchester - - -	26·72	29·77	1668
Preston - - - -	30·03	32·61	1827

Particulars of the registered mortality are given in Tables 1 to 4. There were altogether no more than 7 deaths from *small-pox*, namely, 2 in Portsmouth, and one each in London, Liverpool, Manchester, Bradford, and Leeds; and at the same time the mortalities from *scarlet fever*, *whooping-cough*, *fever*, and *diarrhœa* respectively were below the average in the seven preceding years, while under *measles* there was a slight, and under *diphtheria* a considerable increase.

The mortality from *measles* varied from 0·05 per 1,000 in Derby and 0·06 in Portsmouth, to 1·39 in Manchester, 1·41 in Bolton, 1·68 in Blackburn, and 2·46 in Preston. In the aggregate 28 towns the rate was 0·67, the previous average having been 0·61.

The *scarlet fever* mortality was 0·30 per 1000 in the 28 towns, the seven years average having been 0·39, but varied from under 0·10 in Portsmouth, Norwich,

Wolverhampton, Leicester, and Hull, to 1·05 in Blackburn and 3·40 in Plymouth, in which town 265 deaths were registered as due to this disease.

The mortality from *diphtheria*, which had been rising for many years, was 0·26 per 1000 against an average of 0·17 in the next preceding seven years; the rate varying from 0·04 in Blackburn and 0·05 in Nottingham, Bradford, and Leeds, to 0·41 in Manchester, 0·56 in Plymouth, and 0·72 in Salford.

The death-rate from *whooping-cough* was 0·48 per 1000, the average of the preceding seven years having been 0·62, but varied from 0·04 in Halifax, and 0·09 in Derby, to 0·91 in Birkenhead and 1·87 in Preston.

The mortality from continued fevers was 0·20, the seven years average having been 0·27 per 1000, but varied from 0·10 in Birmingham and in Huddersfield to 0·44 in Salford and 0·61 in Preston.

The mortality from *diarrhœa* was 0·82 per 1000, and below the seven years average which had been 0·89, the highest rates being 1·41 in Sunderland, 1·44 in Salford, 1·47 in Leicester, and 2·29 in Preston.

The highest rates from these seven chief zymotic diseases in the aggregate were 4·57 in Salford, 4·74 in Blackburn, 5·76 in Plymouth, and 7·70 in Preston, while the lowest were 1·51 in Derby, 1·53 in Brighton, 1·67 in Halifax, and 1·93 in Norwich.

In fifty other Town Districts which, though not so large as the twenty-eight Great Towns, are yet of considerable size, and are estimated to contain a population of about three millions, the death-rate in the year was 18·7 per 1000, while in the remainder of England and Wales, after subtracting these seventy-eight towns or urban districts, the rate was 16·9; that for the whole of England and Wales being 17·9, which rate was the lowest on record, excepting that in the immediately preceding year, when it was 17·8.

The following Table shows the relative mortality from each of the above-mentioned zymotics in England and Wales, and also in the twenty-eight great towns, in fifty other town districts, and in the remainder of the country:—

ANNUAL DEATH-RATE per 1,000 from ALL CAUSES, and from several ZYMOTIC DISEASES, during the year 1889.

——	All Causes.	Principal Zymotic Diseases, (Cols. 3–9)	Small-pox.	Measles.	Scarlet Fever.	Diph-theria.	Whoop-ing-couph.	Fever.	Diar-rhœa.
Cols.	1.	2.	3.	4.	5.	6.	7.	8.	9.
England and Wales -	17·9	2·10	0·00	0·49	0·23	0·19	0·40	0·18	0·61
28 Great Towns - -	19·3	2·73	0·00	0·67	0·30	0·26	0·48	0·20	0·82
50 Other Town Districts	18·7	2·36	0·00	0·62	0·24	0·13	0·43	0·20	0·74
England and Wales less the 78 Towns -	16·9	1·70	0·00	0·37	0·18	0·16	0·34	0·17	0·48

The infantile death-rate, or proportion of deaths of infants in the first year of life to the registered births, was 161 to 1000 births in the twenty-eight Great Towns, rising however to 204 in Blackburn, 205 in Leicester, and 264 in Preston. It was 161 in the fifty Large Town Districts, and 144 in the whole of England and Wales.

London.

The year 1889 was again a year of excessively low rates, the birth-rate and the death-rate being each the lowest as yet recorded, and the marriage-rate the lowest with one exception, namely, the immediately preceding year 1888.

Marriages.

The marriages registered in London numbered 35,484, giving a proportion of 16·3 persons married to 1000 of the population. This was a slight recovery from the rate in the immediately preceding year, which had been 16·1, and the lowest on record.

Births.

The births registered in London in 1889 (52 weeks) numbered 131,487, and were in the proportion of 30·3 per 1000 inhabitants. This is the lowest birth-rate as yet recorded in London, the rate having fallen continuously year after year since 1876. Nevertheless, the excess of births over deaths, or the natural increment, was 55,804, though it had averaged only 51,772 in the four immediately preceding years; so that the decline in the birth-rate was more than compensated by the still greater decline of mortality.

Deaths.

The deaths registered in 1889 (52 weeks) numbered 75,683, and corresponded to an annual rate of 17·4 per 1000. This is by far the lowest death-rate as yet recorded in London; moreover, the four next lowest rates are those in the four immediately preceding years 1885–6–7–8, when the figures were respectively 19·8, 19·9, 19·6, and 18·5.

Doubtlessly the London death-rate is to a certain extent vitiated by the fact that some of the Metropolitan Lunatic and Imbecile Asylums * are situated outside Registration London, so that many deaths of Londoners are not included in the London mortality. But against this is to be set the fact, that in the Hospitals and Public Institutions within London many deaths occur of non-residents who have come up for medical advice; and, so far as can be judged from such data as are forthcoming, these two interferences with the proper death-rate may be taken as practically balancing each other.

The following Table shows in a summary form the amount of life saved and the amount lost in the year, compared with the preceding decennium, under each of the more important headings in the list of causes.

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* For information respecting deaths in other London Institutions, *see* Note † to Table I.

Diminution or Excess of Deaths in 1889, compared with Annual Deaths in 1879-88, corrected for increase of Population.

Cause of Death.	Diminution in 1889.	Excess in 1889.
Small-pox	712	—
Measles	278	—
Scarlet Fever	1,103	—
Typhus	33	—
Whooping-cough	1,406	—
Diphtheria	—	656
Simple and Ill-defined Fever	56	—
Enteric Fever	316	—
Diarrhœal Diseases	625	—
Cancer	—	222
Phthisis and Tubercular Diseases	1,920	—
Premature Birth	—	108
Diseases of Nervous System	1,370	—
Diseases of Circulatory System	—	510
Diseases of Respiratory System (including Croup).	4,376	—
Diseases of Urinary System	11	—
Childbirth and Puerperal Fever	151	—
Accident	204	—
Murder, Manslaughter	6	—
Suicide	27	—
All other Causes	2,126	—
	14,720	1,496
Balance of Diminution and Excess	13,224	—

The net gain in the year amounted to 13,224 lives; that is to say, had the death-rate been equal to the average rate in the ten preceding years, 13,224 more persons would have died in London in 1889 than was actually the case. This saving of life was very unequally distributed among the several causes, and there are four headings in the Table under which there is shown to have been an increase, viz., Diphtheria, Cancer, Premature Birth, and Diseases of the Circulatory Organs; and it is noteworthy that these headings have shown similar excess in each of the six preceding Annual Summaries. In each of those six summaries there was also an excess under the heading Diseases of the Urinary System, and again, with the exception of the year 1885, under the heading Suicide; but in the above Table for 1889 the balance has changed sides, and there is a slight falling off in the mortality from each of these causes.

Only one death was ascribed to *small-pox* during the year; in the three next preceding years, 1886–7–8, the numbers were 24, 9, 9, and these four figures are the lowest on record since civil registration was instituted. (Table 12.)

When the year 1889 began a serious outbreak of *measles*, which had commenced in the early autumn of 1888 and had reached its maximum in the latter part of December, was still in progress, and the mortality from this disease remained above the decennial average until the beginning of May, when the epidemic came to an end, and the mortality remained for the rest of the year considerably below the average of the previous decennium. This diminution in the latter part of the year more than

compensated the excess in the earlier months, so that the total number of deaths, namely, 2,314, gave an annual rate of 0·53 per 1000, which was below the average rate, 0·60, in the preceding ten years.

The mortality from *scarlet-fever* was considerably below the decennial average in every week of the year, and the total number of deaths under this heading was only 784, corresponding to an annual rate of 0·18 per 1000, the average rate in the ten preceding years having been 0·44.

The year 1889 showed a further advance in the increasing tendency of Londoners to make use of the public hospitals in cases of scarlet fever. For in 1878 only 7 per cent. of the total deaths from this disease occurred in the London Fever and Metropolitan Asylum Hospitals, from which date the proportion rose year by year until in 1888 it had reached 43·4 per cent., again in 1889 to rise further to 48·9 per cent., or practically one half of the whole.

The deaths ascribed to *typhus* and to *ill-defined forms of continued fever* were respectively 15 and 43, figures which, though somewhat higher than those of the next preceding year, were, nevertheless, far below the decennial averages, which had been 48 and 99 respectively. The deaths from *enteric fever* were 538, a figure not only far below the decennial average, which, after due correction for growth of population, would be 854, but absolutely the lowest as yet recorded.

No similarly favourable account can be given of *diphtheria*, the mortality from which disease had been increasing steadily for many years, but in the last two years, 1888 and 1889, made the most alarming bounds, the deaths rising from a total of 953 in 1887, first to 1,311 and then in 1889 to no less than 1,588, whereas the decennial average, after correction for growth of population, was only 932.

This increase is so formidable that it may be well to give the following table in which are shown the numbers of deaths from this disease for each of the past three years in each sanitary area, the deaths in public institutions having been distributed to the areas from which the patients had been admitted.

Deaths from Diphtheria in the Metropolitan Sanitary Areas in the Three Years 1887, 1888, and 1889, after Distribution of those occurring in Hospitals.

Sanitary Area.	1887.	1888.	1889.	Sanitary Area.	1887.	1888.	1889.
Paddington	29	76	42	Shoreditch	27	32	69
Kensington	40	91	111	Bethnal Green	27	52	102
Hammersmith	44	38	45	Whitechapel	6	24	34
Fulham	19	10	12	St. George-in-the-East	15	15	43
Chelsea	19	14	24	Stepney	14	25	47
St. George Hanover Square	13	46	30	Mile End Old Town	22	20	53
Westminster	25	37	28	Poplar	30	42	64
St. James Westminster	3	5	2	St. Saviour Southwark	8	13	12
Marylebone	14	23	34	St. George Southwark	12	23	20
Hampstead	13	16	8	Newington	27	18	55
Pancras	62	72	62	St. Olave Southwark	2	4	1
Islington	46	50	63	Bermondsey	16	14	23
Hackney	40	76	97	Rotherhithe	6	8	16
St. Giles	23	11	17	Lambeth	105	107	156
St. Martin-in-the-Fields	5	3	2	Wandsworth and Battersea	51	92	77
Strand	10	3	8	Camberwell	65	64	70
Holborn	9	5	17	Greenwich	37	34	30
Clerkenwell	17	26	24	Lewisham	11	31	5
St. Luke's	12	10	13	Woolwich	3	3	6
London City	5	11	12	Plumstead	19	24	18

It will be seen from this Table that in about half of the areas the deaths have gone up at least 50 per cent. since 1887, and that in many of them they have been doubled, and in some cases more than trebled, in that short period. It is to be hoped that the constant increase of this disease may receive some check from the recent arrangements by which cases of it are admitted into the Metropolitan Asylum Hospitals. It appears from reports received from these hospitals, that in the course of the year, 763 cases were admitted; and that of 681 completed cases, 271 terminated fatally, giving a case-mortality of 39·8 per cent. Taking this case-mortality in the hospitals as a guide, we may calculate that the 1588 deaths in the whole of London corresponded to 3990 cases of equal severity to those admitted into hospital, and that of these cases 17·3 per cent. were treated either in the Metropolitan Asylum or London Fever Hospitals. This proportion falls far short of that already given in the case of scarlet fever, but nevertheless exceeds very considerably the proportion for even that disease in former years; for, as already stated, in 1878 only 7 per cent. of the scarlet fever deaths occurred in hospital. The mortality was above the decennial average throughout the entire year, having only fallen in two weeks to the average level; but its main excess was in the four months from the middle of June to the middle of October.

It is probable that some part of the increase under diphtheria may be due to a diminution under the heading Croup, which in accordance with the classification of the College of Physicians is separated from diphtheria, and placed with the respiratory diseases. But this can only be a partial explanation of the rise, which was far greater than the falling off under croup. For the deaths from diphtheria and croup together amounted to 2068 in 1889, while the decennial average, after due correction for increase of population, would have been only 1647.

The mortality from *whooping-cough* was considerably below the decennial average throughout the first nine months of the year, but in the last quarter corresponded pretty closely with it. Taking, however, the whole year the deaths, 1749 in number, were far below the corrected decennial average, which was 3155.

There was a somewhat sharp outbreak of *diarrhœa* in the months of July and August, but it neither covered so long a period of the summer nor did the mortality during that period rise to so high a level as the average; so that, while the corrected decennial average would have given 3257 deaths from this cause, the actual deaths were only 2677, of which 1989 were of infants in the first year of life, and 404 more of children under five.

Taking all the chief zymotic headings together, the deaths from them in 1889 were 9709, while the corrected decennial average would have been 13,537, so that altogether there was a saving of 3828 lives.

Outside the zymotic class there are but few headings under which the mortality in 1889, as shown in Table 14, was in excess of the corrected decennial average. There were, however, notable increases under Alcoholism, Premature Birth, Rickets, Cancer, Diseases of the Organs of Circulation, and Enteritis. Of some of

these increases it is impossible to say how far they were due to real increase, and how far to improved Statement of Cause, which has transferred to more definite headings deaths previously ascribed to such vague causes as Old Age, Convulsions, Atrophy, Debility, and the like. Taking the figures as they stand, there has been a steady and considerable increase under Alcoholism since 1885. Under Premature Birth and under Rickets, the registered mortality has risen, although the birth-rate has diminished and though the proportion of young children in the population must have become smaller. As to Cancer the mortality has been for very many years rising, and this so greatly and so uninterruptedly that, though much of it is doubtlessly due to improved diagnosis and more careful statement of cause, it seems scarcely possible to maintain the optimistic view, expressed in earlier reports, that this is more than a partial explanation of the matter. Indeed it would appear that if the tendency to malignant new growths be, as generally admitted, hereditary, this tendency must necessarily become more and more generally diffused in the population, seeing that the disease as a rule does not manifest itself until the period of child-bearing has ceased or at any rate has commenced, and that practically the existence of this tendency in a family is, even if disclosed, not held to be a bar to marriage. The increase under Diseases of the Organs of Circulation is almost certainly in large measure due to transference from Old Age, but may also in unknown proportion be real, and perhaps ascribable to the increased strain of modern life ; while as regards the remaining heading that shows notable increase, namely Enteritis, one cannot but suspect that this increase, which has been very noticeable in the last four years, may be connected with the simultaneous decrease under Enteric Fever.

The deaths from *hydrophobia*, which in 1885 had been as many as 27, and had fallen in the three next years successively to 9, 2, and 3, again rose in 1889 to 7, but were one below the corrected decennial average. Of these seven deaths, one was registered in each of the first two quarters, and the remaining five in the third quarter of the year, the fourth quarter showing a clean bill.

The deaths from *violence* were considerably below the corrected decennial average, under each of the main divisions. The corrected average would have given 85 deaths from *murder* or *homicide*, 400 from *suicide*, and 2679 from *accident* or *negligence*, whereas the recorded deaths under these headings were respectively 79, 373, and 2475. It is to be noted that of the 2475 deaths from accident or negligence, no less than 609 or a quarter of the whole were deaths of infants under one year of age from suffocation; moreover, this form of negligence, by which infants are overlain by their mothers in bed, appears to be on the increase. For while in the ten years 1878–87 there were 4·0 such deaths to 1000 registered births, the proportion rose in the two years 1888–89 to 4·8 per 1000.

Among the accidental deaths there were, according to Captain Shaw's Report, 44 caused by the 2338 fires to which his brigade were summoned ; while there were 254 caused by horses or conveyances in the street.

The following table shows the number of deaths caused by horses and by different kinds of vehicles ;—

Year.	Description of Vehicle, &c.								Total.
	Horse, &c.	Carriage.	Omnibus.	Tram-car.	Cab.	Cart.	Van, wagon, dray.	Others, and not described.	
1873	13	10	12	17	28	56	79	2	217
1874	28	11	17	14	33	36	67	5	211
1875	11	15	18	9	39	55	82	2	231
1876	13	4	17	12	24	56	84	7	217
1877	16	13	13	4	26	56	97	2	227
1878	17	12	14	10	34	63	84	3	237
1879	16	13	17	18	36	57	74	5	236
1880	12	11	20	17	39	43	76	2	220
1881	13	14	21	23	31	58	88	4	252
1882	12	15	19	23	37	60	100	5	271
1883	6	12	16	25	57	45	57	4	222
1884	12	11	33	18	57	51	74	9	265
1885	12	20	14	11	55	55	89	10	266
1886	10	7	21	9	39	49	111	5	251
1887	13	7	18	19	51	49	85	9	251
1888	5	15	25	9	41	47	91	4	237
1889	15	10	29	12	52	40	83	13	254

Deaths in Workhouses, Hospitals, and Public Lunatic Asylums.—Of the 75,683 deaths registered in London in 1889, 17,660 or 23·3 per cent. occurred in public institutions. If to these be added the 1209 deaths of London residents that occurred in the County and Metropolitan Lunatic and Imbecile Asylums outside the registration area of London, the proportion of deaths in the institutions to the whole mortality was 24·5 per cent., having been 23·6 in the preceding year 1888. This percentage of 24·5 was made up of 12·3 in workhouses, 0·9 in Metropolitan Asylum Hospitals, 9·2 in other hospitals, and 2·1 in lunatic or imbecile asylums. Thus, about 1 in 8 of the deceased persons died in a workhouse and 1 in 105 in a Metropolitan Asylum Hospital; while 1 in 11 died in some other hospital, and 1 in 49 in an asylum for lunatics or imbeciles.

———	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889.
Deaths in Public Institutions	15,491	16,013	14,732	16,932	15,805	16,720	17,477	17,678	17,125	17,253	17,728	17,660
Workhouses*	8,586	9,484	8,575	9,005	8,824	9,608	9,208	9,512	9,708	9,285	9,603	9,503
Metropolitan Asylum Board Hospitals (in or out of London)	1,130	621	609	1,772	653	473	1,333	1,248	248	624	683	729
Other Hospitals	5,442	5,569	5,280	5,862	6,053	6,358	6,651	6,592	6,769	6,972	7,093	7,054
Lunatic Asylums	333	339	268	293	275	281	285	326	400	372	349	374

* Including the Strand Union Workhouse at Edmonton, and the Holborn Union Workhouse at Mitcham.

Mortality in different parts of London.—The distribution of the registered mortality in London is seriously affected by the general hospitals. For purposes of fair comparison between one district, or one group of districts, and another, it is necessary to make correction for this disturbing element. The following Table has, therefore, been constructed, in which the hospital deaths have been transferred to the districts from which the deceased had been admitted, and certain other corrections have been made as explained in the note to the Table.

DEATHS BELONGING to the SEVERAL SANITARY AREAS of REGISTRATION LONDON, registered in the 52 WEEKS of 1889.

SANITARY AREAS.	Deaths.	Deaths from Principal Zymotic Diseases.									Deaths of Infants under 1 Year of Age.	Deaths under 1 Year to 1000 Births registered.
		Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhœa.		
REGISTRATION LONDON	74,362	1	2,309	778	1,552	1,747	15	520	43	2,670	18,518	141
WEST.												
Paddington	1,657	-	11	10	42	26	-	16	-	60	394	138
Kensington	2,427	-	14	28	111	26	-	19	1	68	494	134
Hammersmith	1,634	-	23	19	45	38	-	16	2	52	426	150
Fulham	1,542	-	52	23	12	68	-	5	1	82	498	159
Chelsea	1,790	-	49	11	24	64	-	13	2	58	451	152
St. George Hanover Square	1,235	-	46	4	30	28	-	13	1	31	231	138
Westminster	1,178	-	69	13	28	26	-	3	-	40	233	151
St. James Westminster	500	-	32	6	2	10	-	4	1	14	98	183
NORTH.												
Marylebone	2,646	-	46	5	34	68	1	19	-	63	599	132
Hampstead	753	-	12	2	8	21	-	6	-	18	181	122
Pancras	4,345	-	87	28	62	116	-	30	2	166	1,053	144
Islington	5,035	-	177	40	63	110	-	54	7	178	1,261	132
Hackney	3,334	-	74	39	97	52	1	31	-	100	762	114
CENTRAL.												
St. Giles	904	-	42	4	17	15	-	8	-	37	175	146
St. Martin-in-the-Fields	290	-	5	4	2	8	-	3	-	9	60	212
Strand	639	-	20	5	8	11	-	4	-	24	136	199
Holborn	761	-	13	11	17	8	-	4	-	16	148	157
Clerkenwell	1,372	-	53	16	24	23	-	9	1	59	357	157
St. Luke's	972	-	26	20	13	9	-	4	-	38	241	124
London City	822	-	12	6	12	4	-	4	1	13	101	135
EAST.												
Shoreditch	2,445	-	28	33	69	31	1	17	1	115	705	156
Bethnal Green	2,708	-	132	40	102	62	1	17	3	95	718	145
Whitechapel	1,529	-	70	2	34	13	-	9	-	73	388	147
St. George-in-the-East	1,220	-	16	13	43	5	-	7	-	74	334	181
Stepney	1,357	-	28	25	47	23	1	12	2	63	315	151
Mile End Old Town	2,108	-	61	51	53	31	1	14	-	82	562	142
Poplar	3,013	-	26	31	64	75	-	18	4	84	761	130
SOUTH.												
St. Saviour Southwark	629	-	11	7	12	11	-	1	-	27	149	167
St. George Southwark	1,417	-	78	20	20	32	-	5	-	51	387	175
Newington	2,416	-	114	43	55	79	1	22	2	70	655	166
St. Olave Southwark	315	-	32	2	1	12	-	1	2	15	76	159
Bermondsey	1,787	-	101	21	23	59	4	12	-	67	462	146
Rotherhithe	729	-	27	4	16	24	-	6	-	30	189	131
Lambeth	5,003	1	157	73	156	137	1	32	5	166	1,261	142
Battersea	2,321	-	105	23	33	80	-	14	2	110	729	141
Wandsworth	1,861	-	32	12	44	42	1	12	-	59	433	106
Camberwell	3,880	-	194	37	70	151	-	30	1	130	1,005	138
Greenwich	2,892	-	128	25	30	103	2	13	1	151	771	143
Lewisham (excluding Penge)	892	-	21	14	5	16	-	7	-	29	230	131
Woolwich	781	-	17	2	6	10	-	4	1	18	182	131
Plumstead	1,229	-	68	8	18	20	-	2	-	35	307	112

NOTE.—In the above Table 134 deaths in Hospitals and in other Public Institutions (including the Strand Union Workhouse at Edmonton, the Holborn Union Workhouse at Mitcham, and all the Metropolitan Asylum Hospitals, but not the County and Metropolitan Lunatic and Imbecile Asylums) situated outside Registration London have been distributed to the sanitary areas from which the deceased inmates were admitted; while the deaths of 1,321 non-residents who died in Public Institutions inside London have been excluded.

If the figures in this Table be taken as the basis, and the rates calculated afresh, and if it be assumed that the rate of increase or decrease of population between 1871 and 1881 in the five great groups of districts has since been maintained, we obtain the following results.

BIRTH- and DEATH-RATES of Persons *belonging to* LONDON and its GROUPS of REGISTRATION DISTRICTS, in the 52 weeks of 1889.

	PER 1000 PERSONS LIVING.												
		Deaths from											
	BIRTHS.	ALL CAUSES.	Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Ill-Defined Fever.	Diarrhœa.	Deaths under 1 Year to 1000 Births registered.
REGISTRATION LONDON*	30·3	17·1	2·22	0·00	0·53	0·18	0·36	0·40	0·00	0·12	0·01	0·62	141
West Districts	24·9	15·5	1·93	–	0·38	0·15	0·38	0·37	–	0·12	0·01	0·52	147
North Districts	28·1	15·3	1·73	–	0·38	0·11	0·25	0·35	0·00	0·13	0·01	0·50	130
Central Districts	37·0	26·5	2·94	–	0·79	0·29	0·43	0·36	–	0·17	0·01	0·89	151
East Districts	35·2	19·6	2·59	–	0·49	0·27	0·56	0·33	0·01	0·13	0·01	0·79	146
South Districts	31·3	16·7	2·42	0·00	0·70	0·19	0·31	0·50	0·01	0·10	0·01	0·60	140

* The rates for Registration London given in this Table do not precisely correspond with those given in Table 12, as in calculating the rates given above the deaths of non-residents occurring in hospitals have not been included.

Uncertified Causes of Death.—The causes of 801, or 1·1 per cent. of the registered deaths in Registration London, were not certified either by a registered medical practitioner or by a coroner (Tables 1 and 2); in the four preceding years the proportion ranged from 1·3 to 1·0 per cent. The proportion of uncertified deaths in the aggregate of the twenty-seven provincial towns was 2·9 per cent., but ranged from 0·9 in Plymouth, 1·0 in Portsmouth, and 1·2 in Norwich, to 4·6 in Sheffield, 4·8 in Huddersfield, and 5·6 in Liverpool and in Halifax. Liverpool, Sheffield, and Halifax were also among the four towns showing the largest proportions of uncertified deaths in 1887 and in 1888.

GREATER LONDON.—The estimated population of Greater London (Table 8), which is co-extensive with the Metropolitan and City Police Districts, was 5,642,015 persons in the middle of 1889. The recorded death-rate in this population was 16·8 per 1,000, against 19·3, 18·9, and 17·8 in the three preceding years 1886–7–8. In Inner or Registration London the rate, as has already been noted, was 17·4, while in the Outer Ring of suburban districts around London, after correction for deaths in the four County Lunatic Asylums situated therein, it did not exceed 14·6, against 16·5, 15·9, and 15·0 in the three preceding years. The death-rate from the principal zymotic diseases was 2·10 in Greater London, being 2·24 in Inner London, and 1·62 in the Outer Ring; each of these rates showing a considerable further decline from those returned in recent years. Infant mortality, measured by the proportion of deaths under one year to registered births, was equal to 136 per 1000 in Greater London, against 152 and 140 in 1887 and 1888. In Inner London this proportion of infant mortality was 141 (Tables 2 and 3), while in the Outer Ring of suburban districts it did not exceed 117 per 1000.

Health of Foreign Cities.—The rate of mortality in thirty-three Colonial and Foreign cities (Table 5) averaged 25·8 per 1000 of their estimated population in 1889. In the three principal Indian cities the mean rate was 32·5, against 30·5 in 1888, the rate being 26·7 in Calcutta, 30·2 in Bombay, and 43·0 in Madras. In twenty-two of the largest Foreign European cities, having an estimated population of more than eleven millions of persons, the mean rate of mortality was 25·4 per 1000, corresponding with the rate in the same towns in 1888, but exceeding by 6·1 the mean rate last year in the twenty-eight large English towns, having an aggregate estimated population exceeding nine millions. The lowest rates in the Foreign European cities last year were 19·4 in Brussels and in the Hague, 20·0 in Stockholm, and 20·1 in Christiania; the rates in the other cities ranging upwards to 28·4 in St. Petersburg, 29·3 in Breslau, 29·5 in Buda-Pesth, 30·0 in Venice, 31·0 in Munich, and 39·6 in Moscow. The rate was 23·5 in Paris, 23·0 in Berlin, and 24·4 in Vienna; the mortality in Paris and in Berlin showing an increase upon that in 1888, while the death-rate in Vienna declined. Small-pox caused 395 deaths in Venice, 360 in Prague, and 129 in Paris. The mortality from measles showed the largest proportional excess in Munich, Turin, Amsterdam, and Rotterdam; from scarlet fever in St. Petersburg, Moscow, Stockholm, Munich, and Prague; from diphtheria in Paris, Copenhagen, Christiania, Moscow, Berlin, Hamburg, Dresden, Breslau, Munich, Prague, and Buda-Pesth; from whooping-cough in Copenhagen, Christiania, and Hamburg; and from "fever" (principally enteric) in Paris, St. Petersburg, Moscow, Hamburg, Buda-Pesth, and Rome. Diarrhœa mortality, speaking generally, showed a marked excess in the European cities compared with the English towns, and the excess was especially large in Stockholm, St. Petersburg, Moscow, Berlin, Hamburg, Breslau, Munich, Buda-Pesth, and Venice. The death-rate from all causes was 50·5 in Cairo and 44·3 in Alexandria, the rate in Cairo showing a further increase upon the rates in the two preceding years. A large proportion of the excess of mortality in these Egyptian towns was due to "fever" and diarrhœal diseases. The mean recorded death-rate in six of the principal American cities was 21·9, and considerably lower than in 1888; the rates in the several cities ranging from 17·5 in Baltimore to 25·1 in New York. Diphtheria showed the greatest mortality in New York, Brooklyn, Boston, and St. Louis; scarlet fever in New York; "fever" in Philadelphia; and diarrhœal diseases in New York, Brooklyn, and St. Louis.

CITIES AND BOROUGHS.	Population, Estimated to the middle of 1889.*	Persons to an Acre.	Births.	Deaths.	The Deaths registered in the 52 Weeks include: Deaths of: Infants under 1 Year of Age.	Deaths of: Persons aged 60 Years and upwards.	Deaths from: Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Violence.	Inquest Cases.	Deaths in Public Institutions.	Uncertified Causes of Death.	Mean Temperature.	Rain-fall (Inches).	CITIES AND BOROUGHS.
Cols.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	Cols.
28 Towns -	9,555,406	38·0	295156	183617	47483	40300	25988	7	6339	2843	2466	4589	1894	7859	6467	12232	31623	3886	47°6	25·60	- 28 Towns.
London† - - -	4,351,738	58·3	131487	75683	18580	18346	9709	1	2314	784	1588	1749	596	2677	2928	5763	17660	801	48·8	23·29	London.†
Brighton - -	121,807	48·5	2965	1834	388	590	186	–	46	17	12	26	18	67	52	73	322	57	48·6	26·41	Brighton.
Portsmouth - -	141,253	32·7	4945	2550	684	661	294	2	8	12	32	93	34	113	86	151	296	25	–	–	Portsmouth.
Norwich - -	94,510	12·6	3184	1731	519	560	182	–	31	6	16	26	21	82	36	97	177	20	–	–	Norwich.
Plymouth - -	78,225	53·3	2487	1964	413	484	449	–	16	265	44	54	17	53	35	92	153	17	49·8	33·83	Plymouth.
Bristol - - -	229,361	40·5	6694	4022	976	1061	488	–	182	28	16	100	37	125	151	282	672	97	47·6	29·70	Bristol.
Wolverhampton -	82,544	24·3	2666	1697	481	412	191	–	40	7	7	48	12	77	65	119	250	26	45·9	25·05	Wolverhampton.
Birmingham - -	454,835	54·1	14035	8485	2390	1756	1213	–	197	155	57	277	44	483	363	715	1434	202	–	–	Birmingham.
Leicester - -	150,520	47·0	4757	2540	974	538	350	–	61	6	10	25	26	222	92	273	327	64	–	–	Leicester.
Nottingham - -	237,812	23·9	6636	4027	1207	941	554	–	83	33	11	155	67	205	119	227	462	75	46·9	25·95	Nottingham.
Derby - - -	98,529	28·6	2806	1607	415	437	148	–	5	20	19	9	18	77	59	150	209	26	–	–	Derby.
Birkenhead - -	102,541	26·6	3197	1820	543	374	285	–	68	13	8	93	35	68	63	133	194	28	–	–	Birkenhead.
Liverpool - -	606,562	116·4	17676	13046	3320	2003	2029	1	485	352	57	342	211	581	606	694	2274	728	47·8	27·28	Liverpool.
Bolton - - -	114,670	47·7	3752	2517	625	470	472	–	161	64	33	64	31	119	65	139	185	49	–	–	Bolton.
Manchester - -	378,800	63·9	13332	10088	2346	1831	1516	1	525	174	153	164	97	402	350	742	2013	211	–	–	Manchester.
Salford - - -	234,283	45 3	6903	4782	1264	765	1067	–	222	180	167	60	103	335	120	211	691	159	–	–	Salford.
Oldham - - -	142,405	30·1	4030	2901	719	571	411	–	124	54	15	128	19	71	73	149	242	101	–	–	Oldham.
Blackburn - -	121,275	17 4	4148	3077	846	545	573	–	293	127	5	77	24	137	62	96	283	70	–	–	Blackburn.
Preston - - -	104,194	28·0	3959	3118	1044	520	800	–	255	18	31	194	63	239	48	92	176	82	–	–	Preston.
Huddersfield -	92,825	8·8	2275	1742	382	433	187	–	99	26	12	15	9	35	34	37	160	84	–	–	Huddersfield.
Halifax - -	81,080	21·5	2263	1742	397	456	135	–	72	8	12	3	20	29	53	64	182	97	–	–	Halifax.
Bradford - -	235,056	21·8	6272	4491	1139	973	647	1	118	62	12	192	52	219	131	259	467	84	47·4	22·79	Bradford.
Leeds - - -	357,449	16·6	11706	7862	2071	1643	1196	1	345	110	18	153	129	440	221	521	749	126	48·4	20·98	Leeds.
Sheffield - -	327,227	16·7	10846	6802	1892	1295	1064	–	224	227	52	147	71	343	143	258	623	315	–	–	Sheffield.
Hull - - -	208,017	26·3	6759	4197	1243	896	635	–	199	13	17	118	49	239	129	169	436	175	46·1	23·32	Hull.
Sunderland - -	134,193	44·3	4818	3059	871	603	485	–	131	38	22	70	37	187	118	236	234	39	–	–	Sunderland.
Newcastle - -	160,983	30·0	6128	4042	1070	790	488	–	93	29	32	130	25	179	146	303	457	88	46·6	22·96	Newcastle.
Cardiff - - -	112,712	15·3	4340	2191	684	346	234	–	41	15	8	77	29	64	119	187	282	40	–	–	Cardiff.

* These estimates are based on the assumption that the rates of increase which prevailed between 1871 and 1881 have since been maintained.

† For the purposes of these Tables, London includes the Strand Union Workhouse at Edmonton, the Holborn Union Workhouse at Mitcham, and the Metropolitan Asylum Hospitals situated outside Registration London. Several of the provincial towns have been similarly corrected by the addition of deaths occurring in Public Institutions situated beyond their limits.

Table 2.—28 Towns.—Birth-, and Death-rates, and Analysis of Mortality, in the 52 Weeks of 1889.

In this Table, 0·00 indicates that the deaths were too few to give a rate of 0·005; when *no deaths* occurred, — is inserted.

CITIES AND BOROUGHS.	Annual Rates per 1000 Persons living.														Deaths under 1 Year to 1000 Births.	Annual Rate of Mortality per 1000 living.		Percentage to Total Deaths.			CITIES AND BOROUGHS.
	Births in 52 Weeks ending 28th Dec. 1889.	Total Deaths. 52 Weeks ending				Deaths from										Aged 1 to 60 Years.	Aged 60 Years and upwards.	Inquest Cases.	Deaths in Public Institutions.	Uncertified Causes of Death.	
		1st Jan. 1887.	31st Dec. 1887.	29th Dec. 1888.	28th Dec. 1889.	Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Violence.							
Cols.	1.	3.	4.	5.	2.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	Cols.
28 Towns - -	31·0	20·9	20·8	19·2	19·3	2·73	0·00	0·67	0·30	0·26	0·48	0·20	0·82	0·68	161	11·0	71·6	6·7	17·2	2·1	- 28 Towns.
London* - -	30·3	19·9	19·6	18·5	17·4	2·24	0·00	0·53	0·18	0·37	0·40	0·14	0·62	0·68	141	9·8	67·3	7·6	23·3	1·1	London.*
Brighton - -	24·4	17·1	16·9	16·1	15·1	1·53	—	0·38	0·14	0·10	0·21	0·15	0·55	0·43	131	7·9	61·4	4·0	17·6	3·1	Brighton.
Portsmouth - -	35·1	23·8	19·5	18·8	18·1	2·09	0·01	0·06	0·09	0·23	0·66	0·24	0·80	0·61	138	9·5	68·3	5·9	11·6	1·0	Portsmouth.
Norwich - - -	33·8	23·3	20·4	20·2	18·4	1·93	—	0·33	0·06	0·17	0·28	0·22	0·87	0·38	163	7·9	65·4	5·6	10·2	1·2	Norwich.
Plymouth - -	31·9	23·5	22·7	22·3	25·2	5·76	—	0·21	3·40	0·56	0·69	0·22	0·68	0·45	166	15·5	67·7	4·7	8·5	0·9	Plymouth.
Bristol - - -	29·3	19·3	20·4	16·9	17·6	2·13	—	0·80	0·12	0·07	0·44	0·16	0·54	0·66	146	9·6	66·4	7·0	16·7	2·4	Bristol.
Wolverhampton -	32·4	22·2	21·7	20·7	20·6	2·32	—	0·49	0·09	0·09	0·58	0·15	0·92	0·79	180	10·8	78·4	7·0	14·7	1·5	Wolverhampton.
Birmingham - -	31·0	19·9	19·7	17·8	18·7	2·68	—	0·43	0·34	0·13	0·61	0·10	1·07	0·80	170	10·5	73·3	8·4	16·9	2·4	Birmingham.
Leicester - -	31·7	20·3	19·5	18·3	16·9	2·33	—	0·41	0·04	0·07	0·17	0·17	1·47	0·61	205	7·5	59·9	10·7	12·9	2·5	Leicester.
Nottingham - -	28·0	20·4	18·7	17·3	17·0	2·34	—	0·35	0·14	0·05	0·65	0·28	0·87	0·50	182	8·7	64·1	5·6	11·5	1·9	Nottingham.
Derby - - -	28·6	18·2	17·1	16·3	16·4	1·51	—	0·05	0·20	0·19	0·09	0·18	0·80	0·60	148	8·4	78·5	9·3	13·0	1·6	Derby.
Birkenhead - -	31·3	19·1	21·0	17·8	17·8	2·79	—	0·67	0·13	0·08	0·91	0·34	0·66	0·62	170	9·6	69·8	7·3	10·7	1·5	Birkenhead.
Liverpool - -	29·2	23·8	23·7	20·3	21·6	3·36	0·00	0·80	0·58	0·09	0·57	0·35	0·97	1·00	188	13·9	66·4	5·3	17·4	5·6	Liverpool.
Bolton - - -	32·8	23·1	21·3	21·6	22·0	4·13	—	1·41	0·56	0·29	0·56	0·27	1·04	0·57	167	13·5	84·6	5·5	7·4	1·9	Bolton.
Manchester - -	35·3	26·3	23·7	26·1	26·7	4·02	0·00	1·39	0·46	0·41	0·43	0·26	1·07	0·93	176	17·0	99·1	7·4	20·0	2·1	Manchester.
Salford - - -	30·0	22·1	22·2	21·1	20·5	4·57	—	0·94	0·77	0·72	0·26	0·44	1·44	0·51	181	12·8	72·1	4·4	14·5	3·3	Salford.
Oldham - - -	28·4	22·8	23·8	20·3	20·4	2·90	—	0·87	0·38	0·11	0·90	0·13	0·51	0·51	178	12·3	83·3	5·1	8·3	3·5	Oldham.
Blackburn - -	34·3	25·5	25·5	23·9	25·5	4·74	—	1·68	1·05	0·04	0·64	0·20	1·13	0·51	204	15·2	91·1	3·1	9·2	2·3	Blackburn.
Preston - - -	38·1	28·9	27·9	23·9	30·0	7·70	—	2·46	0·17	0·30	1·87	0·61	2·29	0·46	264	16·4	87·6	3·0	5·6	2·6	Preston.
Huddersfield -	24·6	19·6	23·0	18·5	18·8	2·02	—	0·97	0·28	0·13	0·16	0·10	0·38	0·37	168	11·0	78·3	2·1	9·2	4·8	Huddersfield.
Halifax - - -	28·0	22·8	21·0	19·4	21·6	1·67	—	0·89	0·10	0·15	0·04	0·25	0·24	0·66	175	12·1	90·5	3·7	10·4	5·6	Halifax.
Bradford - -	26·8	19·2	19·9	17·1	19·2	2·76	0·00	0·50	0·26	0·05	0·82	0·22	0·91	0·56	182	11·1	80·4	5·8	10·4	1·9	Bradford.
Leeds - - -	32·9	21·9	21·1	20·6	22·1	3·36	0·00	0·97	0·31	0·05	0·43	0·36	1·24	0·62	177	12·7	86·2	6·6	9·5	1·6	Leeds.
Sheffield - -	33·3	19·8	21·6	20·5	20·9	3·26	—	0·69	0·70	0·16	0·45	0·22	1·04	0·44	174	12·1	81·2	3·8	9·2	4·6	Sheffield.
Hull - - -	32·6	18·8	19·2	16·4	20·3	3·06	—	0·96	0·06	0·08	0·57	0·24	1·15	0·62	184	10·9	69·8	4·0	10·4	4·2	Hull.
Sunderland - -	36·0	19·5	19·7	18·1	22·9	3·63	—	0·98	0·28	0·16	0·52	0·28	1·41	0·88	181	13·0	77·7	7·7	7·6	1·3	Sunderland.
Newcastle - -	38·2	22·2	25·3	20·6	25·2	3·04	—	0·58	0·18	0·20	0·81	0·16	1·11	0·91	175	14·9	88·6	7·5	11·3	2·2	Newcastle.
Cardiff - - -	38·6	22·6	21·9	20·5	19·5	2·08	—	0·37	0·13	0·07	0·69	0·26	0·56	1·06	158	11·2	68·6	8·5	12·9	1·8	Cardiff.

Twenty-eight Towns: Death-rates from All Causes, and from the Principal Zymotic Diseases, and Infant Mortality, in the Ten Years 1879–88, and in 1889.

In this Table 0·00 indicates that the deaths were too few to give a rate of 0·005; when *no deaths* occurred, – is inserted.

Towns.	All Causes.		Small-pox.		Measles.		Scarlet Fever.		Diphtheria.		Whooping-cough.		Fever.		Diarrhœa.		Deaths under One Year to 1000 Births.		Towns.
	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	Ten years 1879–88.	1889.	
28 Towns†	21·0	19·3	0·09	0·00	0·61	0·67	0·39	0·30	0·17	0·26	0·62	0·48	0·27	0·20	0·89	0·82	162	161	**28 Towns.†**
London*	20·6	17·4	0·17	0·00	0·60	0·53	0·44	0·18	0·21	0·37	0·73	0·40	0·23	0·14	0·75	0·62	152	141	London.*
Brighton	18·4	15·1	0·01	–	0·36	0·38	0·32	0·14	0·11	0·10	0·48	0·21	0·18	0·15	0·69	0·55	145	131	Brighton.
Portsmouth	19·8	18·1	0·00	0·01	0·50	0·06	0·13	0·09	0·44	0·23	0·34	0·66	0·59	0·24	0·86	0·80	137	138	Portsmouth.
Norwich	21·1	18·4	0·00	–	0·41	0·33	0·42	0·06	0·12	0·17	0·40	0·28	0·33	0·22	1·09	0·87	168	163	Norwich.
Plymouth	22·2	25·2	0·09	–	0·89	0·21	0·11	3·40	0·16	0·56	0·49	0·69	0·30	0·22	0·63	0·68	158	166	Plymouth.
Bristol	19·4	17·6	0·03	–	0·41	0·80	0·47	0·12	0·08	0·07	0·50	0·44	0·18	0·16	0·52	0·54	141	146	Bristol.
Wolverhampton	21·7	20·6	0·02	–	0·51	0·49	0·37	0·09	0·08	0·09	0·44	0·58	0·16	0·15	1·09	0·92	161	180	Wolverhampton.
Birmingham	20·3	18·7	0·05	–	0·45	0·48	0·35	0·34	0·13	0·13	0·65	0·61	0·17	0·10	1·18	1·07	164	170	Birmingham.
Leicester	21·0	16·9	–	–	0·47	0·41	0·53	0·04	0·09	0·07	0·44	0·17	0·22	0·17	1·67	1·47	203	205	Leicester.
Nottingham	21·2	17·0	0·04	–	0·56	0·35	0·60	0·14	0·09	0·05	0·47	0·65	0·32	0·23	1·08	0·87	174	182	Nottingham.
Derby†	17·8	16·4	0·01	–	0·38	0·05	0·23	0·20	0·03	0·19	0·40	0·09	0·30	0·18	0·53	0·80	143	148	Derby.†
Birkenhead	19·4	17·8	0·02	–	0·44	0·67	0·54	0·13	0·10	0·08	0·45	0·91	0·31	0·34	0·64	0·66	140	170	Birkenhead.
Liverpool	25·1	21·6	0·04	0·00	0·90	0·80	0·64	0·58	0·14	0·09	0·70	0·57	0·51	0·35	1·08	0·97	180	188	Liverpool.
Bolton†	22·2	22·0	0·03	–	0·76	1·41	0·20	0·56	0·06	0·29	0·57	0·56	0·26	0·27	1·35	1·04	176	167	Bolton.†
Manchester	26·9	26·7	0·03	0·00	0·73	1·39	0·56	0·46	0·12	0·41	0·78	0·43	0·27	0·26	1·07	1·07	177	176	Manchester.
Salford	23·2	20·5	0·01	–	0·72	0·94	0·71	0·77	0·12	0·72	0·75	0·26	0·40	0·44	1·41	1·44	181	181	Salford.
Oldham	23·0	20·4	0·02	–	0·61	0·87	0·58	0·38	0·15	0·11	0·50	0·90	0·22	0·13	0·69	0·51	169	178	Oldham.
Blackburn†	24·3	25·5	0·02	–	0·93	1·63	0·66	1·05	0·01	0·04	0·53	0·64	0·47	0·20	1·19	1·13	189	204	Blackburn.†
Preston†	26·9	30·0	0·03	–	0·63	2·46	0·49	0·17	0·14	0·30	0·53	1·87	0·50	0·61	2·25	2·29	213	264	Preston.†
Huddersfield†	20·6	18·8	0·00	–	0·58	0·97	0·22	0·28	0·12	0·13	0·50	0·16	0·15	0·10	0·44	0·38	179	168	Huddersfield.†
Halifax†	21·0	21·6	0·00	–	0·34	0·89	0·29	0·10	0·03	0·15	0·26	0·04	0·24	0·25	0·37	0·24	157	175	Halifax.†
Bradford	19·8	19·2	0·01	0·00	0·44	0·50	0·46	0·26	0·05	0·05	0·42	0·82	0·21	0·22	0·82	0·91	162	182	Bradford.
Leeds	22·1	22·1	0·02	0·00	0·43	0·97	0·75	0·31	0·08	0·05	0·53	0·43	0·33	0·36	1·19	1·24	171	177	Leeds.
Sheffield	21·7	20·9	0·23	–	0·41	0·69	0·81	0·70	0·06	0·16	0·61	0·45	0·30	0·22	1·12	1·04	166	174	Sheffield.
Hull	20·8	20·3	0·04	–	0·39	0·96	0·88	0·06	0·07	0·08	0·50	0·57	0·30	0·24	1·15	1·15	157	184	Hull.
Sunderland	22·3	22·9	0·13	–	0·71	0·98	0·95	0·28	0·09	0·16	0·47	0·52	0·34	0·28	0·98	1·41	153	181	Sunderland.
Newcastle	23·5	25·2	0·10	–	0·66	0·58	0·68	0·18	0·10	0·20	0·55	0·81	0·37	0·16	0·82	1·11	160	175	Newcastle.
Cardiff†	22·2	19·5	0·04	–	0·76	0·37	0·50	0·13	0·24	0·07	0·55	0·69	0·37	0·26	0·99	0·56	166	158	Cardiff.†

* *See* note (†) to Table 1.

† The rates for years prior to 1882 cannot be ascertained for these towns or for the aggregate of the 28 towns; the mean rates for the 7 years 1882–88 have therefore been inserted in the columns for decennial rates.

TABLE 4.—**28 Towns.—Mean Temperature** at **Greenwich,** and **Annual Rate** of **Mortality** in each **Town,** in each **Week** of **1889.**

Number of Week.	Week ending	Mean Temperature at Greenwich.		Annual Rate of Mortality per 1000 in																										
		Fahrenheit. *	Centigrade. †	Twenty-eight Towns.	London.*	Brighton.	Portsmouth.	Norwich.	Plymouth.	Bristol.	Wolverhampton.	Birmingham.	Leicester.	Nottingham.	Derby.	Birkenhead.	Liverpool.	Bolton.	Manchester.	Salford.	Oldham.	Blackburn.	Preston.	Huddersfield.	Halifax.	Bradford.	Leeds.	Sheffield.	Hull.	Sunderland.	Newcastle.	Cardiff.
		°	°																												
	YEAR (52 weeks)	48·8	9·33	19·3	17·4	15·1	18·1	18·4	25·2	17·6	20·6	18·7	16·9	17·0	16·4	17·8	21·6	22·0	26·7	20·5	20·4	25·5	30·0	18·8	21·6	19·2	22·1	20·9	20·3	22·9	25·2	19·5
	March Qr (13 weeks)	38·2	3·44	20·9	19·5	15·5	19·0	21·4	21·7	20·3	21·9	20·6	18·0	18·9	18·2	20·2	24·2	23·2	28·5	22·8	24·1	32·3	28·0	20·9	20·8	19·1	22·0	26·1	17·1	20·8	23·6	23·2
	June „ (13 weeks)	54·5	12·50	18·2	16·0	14·7	16·4	17·2	23·8	16·2	19·1	17·5	14·9	16·7	16·1	16·3	19·2	22·6	28·0	19·8	21·8	23·9	32·6	19·2	23·3	18·1	22·1	19·4	20·4	19·6	23·7	18·2
	Sept. „ (13 weeks)	58·9	14·94	18·6	16·5	14·4	19·0	18·0	26·6	16·4	19·6	18·6	18·6	16·2	14·2	19·1	21·0	20·2	24·4	20·6	16·1	21·5	33·0	15·6	19·3	18·2	21·7	20·5	21·4	25·9	27·6	20·0
	Dec. „ (13 weeks)	43·5	6·39	19·4	17·8	15·9	18·1	16·9	28·7	17·5	21·9	18·1	16·2	16·2	16·9	15·7	21·9	22·1	26·0	18·7	19·7	24·2	26·5	19·6	22·8	21·3	22·5	20·5	22·1	25·1	25·8	16·6
1	Jan. 5	31·8	−0·11	22·7	21·4	12·9	23·3	23·2	21·3	21·4	19·0	22·1	23·2	20·6	21·7	13·7	29·6	25·9	28·0	23·8	23·8	39·2	27·0	22·5	20·6	22·0	25·7	20·3	19·1	23·3	20·1	32·9
2	„ 12	35·3	1·83	25·5	24·9	16·7	21·1	24·8	21·3	25·5	28·4	28·3	23·9	18·2	21·7	26·0	28·9	24·1	34·6	26·7	26·7	44·8	30·5	24·2	25·1	20·0	24·2	26·0	18·8	22·6	23·7	31·9
3	„ 19	37·8	3·22	22·0	21·2	16·3	20·7	20·4	24·0	22·5	22·1	21·9	15·6	16·2	15·9	18·3	27·5	20·5	26·9	19·6	28·2	34·9	24·5	23·6	26·4	16·6	26·0	23·6	11·5	21·0	20·4	33·8
4	„ 26	38·5	3·61	20·6	19·4	17·1	15·9	15·5	23·3	18·2	17·1	24·9	19·8	18·9	12·2	19·3	24·9	19·6	26·9	23·8	25·7	27·1	28·0	20·2	23·8	15·8	18·1	25·5	14·5	20·2	21·7	24·5
5	Feb. 2	43·1	6·17	20·0	18·8	16·7	14·4	28·7	14·7	19·1	24·0	18·7	17·7	20·0	20·1	30·5	20·9	20·0	25·5	23·4	22·7	33·6	22·5	20·2	19·3	16·9	20·7	20·9	14·8	19·4	24·0	23·1
6	„ 9	35·6	2·00	19·1	17·5	11·1	14·0	16·0	28·0	19·1	22·1	18·7	13·2	17·6	21·2	20·9	23·8	20·0	26·4	20·5	23·1	32·3	26·0	18·0	20·6	17·1	16·3	22·5	15·3	17·9	24·0	20·8
7	„ 16	34·3	1·28	19·8	18·2	16·7	18·5	22·6	14·0	23·2	18·3	17·4	13·9	20·6	18·0	21·4	21·0	22·7	29·3	24·9	23·5	28·4	24·0	21·9	15·4	21·5	18·2	21·5	17·6	21·4	26·3	19·0
8	„ 23	41·4	5·22	19·9	18·8	10·7	18·8	21·5	17·3	18·7	24·7	20·2	20·8	15·6	27·0	17·8	19·7	21·5	23·6	20·9	28·2	27·5	29·0	17·4	19·3	15·1	20·9	20·4	16·8	22·2	23·0	22·2
9	March 2	32·8	0·44	19·7	17·6	14·6	18·5	17·7	28·0	17·7	21·5	18·9	19·1	19·5	16·9	20·4	24·0	21·4	25·3	22·0	23·5	28·4	33·6	22·5	23·8	18·9	20·3	23·9	15·3	19·1	26·3	15·3
10	„ 9	37·4	3·00	21·0	19·6	16·3	23·6	23·7	17·3	17·3	26·5	17·2	17·3	19·1	14·3	19·3	23·7	23·7	29·6	24·1	23·8	31·0	28·5	15·7	21·2	22·2	22·5	24·6	17·6	21·4	30·5	18·1
11	„ 16	38·8	3·78	21·3	19·7	19·3	20·3	25·4	21·3	23·0	23·4	18·4	17·0	19·5	17·5	20·4	23·1	30·5	27·8	23·8	16·9	33·1	32·5	24·7	25·7	20·4	24·4	24·9	22·6	14·0	23·3	17·1
12	„ 23	42·5	5·83	20·8	18·6	15·0	20·7	19·3	23·3	18·7	18·3	20·1	16·6	20·4	17·5	18·8	24·2	26·4	31·5	22·3	21·6	36·1	29·5	19·7	16·1	19·1	26·3	23·9	18·8	28·8	19·4	23·1
13	„ 30	45·6	7·56	19·9	17·7	17·6	17·4	19·3	27·4	19·6	19·6	21·2	16·3	18·9	12·7	15·8	22·7	26·8	30·3	20·3	25·7	23·2	28·0	21·4	18·5	22·4	22·6	21·8	19·3	19·8	24·0	19·4

14	April	6	43·5	6·39	20·3	18·8	12·9	16·3	19·3	18·0	19·3	22·8	21·5	17·3	17·8	21·2	17·8	19·9	25·9	27·8	20·7	26·4	30·6	30·0	21·4	17·4	20·9	23·9	24·9	18·1	18·3	20·7	19·0
15	„	13	43·5	6·39	19·9	17·9	20·1	20·3	16·6	20·0	17·1	13·9	22·6	15·9	20·2	14·8	13·7	23·3	21·8	28·1	17·6	25·3	30·1	31·0	22·5	19·3	17·8	24·5	21·8	15·6	22·9	28·2	18·1
16	„	20	46·5	8·06	19·4	17·1	12·0	19·9	16·6	26·0	18·7	17·1	19·4	13·9	19·7	17·5	14·2	21·0	21·8	28·6	24·1	24·6	28·0	37·6	21·9	16·7	20·4	23·6	19·3	18·3	17·1	25·6	23·1
17	„	27	47·5	8·61	19·5	17·5	12·4	16·3	27·1	30·0	18·0	25·9	18·7	16·3	15·8	15·4	18·8	19·6	20·0	28·5	19·8	19·4	23·2	38·6	24·2	22·5	18·4	27·2	19·1	24·6	14·0	25·3	17·6
18	May	4	50·8	10·44	19·4	16·6	22·3	16·6	21·0	30·0	18·0	15·2	16·3	13·2	20·6	18·5	19·8	21·9	28·7	28·4	19·2	29·3	32·3	29·5	21·4	25·7	18·4	25·3	22·3	19·6	19·8	23·7	19·4
19	„	11	57·7	14·28	18·8	15·5	15·9	17·4	22·1	22·0	17·1	22·1	18·6	16·6	17·1	16·4	20·4	19·1	28·7	31·5	21·2	25·3	25·0	31·5	19·7	32·2	23·1	23·6	19·5	23·6	17·5	24·0	11·8
20	„	18	54·0	12·22	17·2	14·8	15·9	14·8	11·0	20·7	15·0	19·0	18·6	11·1	14·5	15·9	14·8	16·0	22·7	28·2	18·7	25·7	22·4	38·1	16·9	25·7	20·0	19·3	16·7	18·6	19·8	23·7	23·6
21	„	25	61·9	16·61	17·3	15·2	12·9	13·3	15·5	28·7	16·6	14·5	16·3	12·1	19·1	12·2	14·8	17·5	28·2	28·8	21·8	20·2	19·8	30·5	15·2	22·5	17·8	19·7	17·1	17·1	21·0	24·6	14·8
22	June	1	55·7	13·17	16·5	13·8	13·7	18·1	17·1	29·4	13·6	15·2	16·9	14·9	16·0	14·8	15·3	18·3	21·4	25·1	17·4	18·7	17·6	38·6	18·0	25·7	12·7	18·5	18·2	20·6	18·7	25·3	17·6
23	„	8	64·3	17·94	17·7	15·7	18·0	15·1	13·8	26·0	13·0	25·3	13·4	10·1	17·8	21·7	18·8	18·1	17·3	30·2	21·6	20·2	22·8	36·1	19·7	27·0	16·9	18·2	19·5	22·1	21·4	22·7	14·8
24	„	15	56·8	13·78	16·6	15·0	11·1	14·4	13·3	20·6	16·4	23·4	13·5	16·6	12·7	14·3	12·7	18·2	15·9	26·3	15·1	17·6	20·7	38·0	19·1	20·6	16·4	18·7	17·9	19·6	21·0	20·2	17·6
25	„	22	59·6	15·33	16·7	14·9	9·9	14·0	16·6	20·7	14·8	15·2	16·6	15·6	11·2	10·6	12·2	16·9	22·3	27·1	20·3	13·9	15·5	26·0	15·7	25·1	15·8	21·9	17·7	25·3	18·3	23·0	18·1
26	„	29	64·1	17·83	17·3	15·2	13·7	16·3	14·9	18·0	13·0	19·0	15·5	20·1	14·9	15·9	18·3	20·5	19·6	25·9	20·3	17·6	22·4	23·5	14·6	22·5	16·4	22·6	16·9	22·1	24·9	21·4	18·5
27	July	6	63·3	17·39	17·7	16·2	11·6	15·9	19·9	20·0	15·5	15·8	14·3	20·5	11·2	13·8	19·8	17·8	15·0	25·3	24·9	12·1	15·1	29·0	17·4	18·0	19·1	26·9	18·0	20·1	21·0	29·2	19·4
28	„	13	63·0	17·22	21·5	19·2	15·9	22·5	16·0	24·0	16·4	14·5	22·6	28·1	20·4	19·6	22·4	24·6	26·4	26·7	26·7	20·5	23·7	30·5	12·9	20·6	22·9	25·8	23·3	22·3	30·3	31·8	20·8
29	„	20	58·7	14·83	21·0	18·7	12·0	19·2	16·0	21·3	15·5	17·1	24·3	26·0	18·2	15·4	26·0	29·2	18·2	24·9	25·6	14·7	15·5	38·1	21·4	16·7	19·3	28·5	20·4	18·6	26·8	26·9	17·6
30	„	27	55·1	14·50	21·0	18·6	14·6	21·8	18·8	28·0	16·4	19·6	22·0	23·6	18·0	12·2	20·4	26·3	21·4	25·1	26·1	16·5	24·5	48·6	10·7	25·1	18·9	26·1	23·4	25·3	27·2	25·3	23·6
31	August	3	64·9	18·28	20·5	18·4	14·1	19·6	24·3	24·7	15·7	19·6	23·1	21·5	19·7	18·5	14·8	23·4	19·6	27·0	24·5	23·8	29·2	42·6	15·7	19·3	20·9	23·2	20·7	21·8	28·8	25·9	21·8
32	„	10	69·4	15·78	18·8	16·4	18·0	18·5	18·8	31·4	15·7	18·3	18·7	20·5	18·0	14·3	20·9	19·2	22·7	24·5	16·9	13·9	21·9	34·6	19·1	16·7	19·5	20·3	23·9	21·6	28·4	30·8	24·5
33	„	17	59·3	15·17	19·2	16·6	18·0	20·7	21·5	26·7	15·9	22·1	23·4	18·0	16·2	9·0	21·9	18·3	23·2	23·0	18·7	17·2	25·0	42·6	16·9	22·5	18·4	22·8	22·6	23·1	29·5	27·9	18·1
34	„	24	57·8	14·33	17·2	14·9	11·1	21·1	14·9	34·0	20·5	20·2	15·9	18·0	15·4	14·3	18·8	19·0	15·0	24·4	19·4	14·7	18·1	26·5	14·6	16·7	12·4	15·8	21·5	23·6	23·8	29·2	25·5
35	„	31	60·2	15·67	18·9	15·1	13·7	15·1	14·9	24·0	16·4	29·7	15·0	9·7	14·7	9·0	20·9	19·7	16·8	23·4	18·0	13·2	23·2	24·5	14·6	17·4	20·4	17·8	18·2	21·3	22·6	25·6	13·9
36	Sept.	7	60·5	15·83	16·2	14·0	15·0	19·6	18·2	25·4	13·9	14·5	17·3	13·2	16·9	15·9	15·8	18·2	20·5	20·7	18·3	15·0	19·4	26·0	16·9	16·1	18·2	18·5	14·8	17·6	20·6	26·9	19·0
37	„	14	63·0	17·22	16·7	14·8	13·3	18·5	16·0	31·4	18·0	18·3	15·0	14·2	14·7	13·2	13·7	19·6	20·9	21·1	13·4	16·1	20·7	27·5	15·7	27·0	14·2	17·4	18·7	18·1	25·7	25·6	16·2
38	„	21	51·1	10·61	17·0	15·2	12·4	15·1	19·9	22·7	15·5	19·0	14·7	12·8	14·3	12·7	15·3	18·9	20·9	21·1	18·3	17·6	18·5	27·5	18·5	14·2	17·5	20·4	21·0	20·6	25·3	26·9	20·4
39	„	28	50·6	10·33	17·9	16·3	17·1	19·6	14·9	32·7	18·4	25·9	15·8	15·9	12·5	16·9	17·3	18·7	21·4	24·5	17·1	14·7	28·0	31·0	7·9	20·6	15·3	18·5	19·5	20·1	27·6	27·2	19·0
40	October	5	48·9	9·39	17·6	16·6	18·9	17·4	23·2	19·3	15·9	24·0	13·2	10·7	14·9	10·1	16·3	19·2	17·7	25·8	19·4	15·8	19·8	19·5	15·7	20·6	18·2	18·1	19·5	20·8	25·7	25·3	11·1
41	„	12	49·8	9·89	17·5	15·8	16·3	15·5	16·0	32·7	12·3	15·2	16·2	14·9	14·3	13·8	17·8	19·3	17·3	24·2	16·0	16·5	20·7	28·0	16·9	21·9	16·4	21·8	18·3	20·6	27·6	25·6	9·3
42	„	19	49·4	9·67	18·7	16·9	14·6	15·9	18·2	31·4	20·7	19·0	17·1	13·5	14·5	13·2	15·8	21·5	19·1	22·0	16·3	17·6	22·4	34·1	22·5	22·5	20·6	24·2	21·4	25·1	23·7	26·3	14·8
43	„	26	46·7	8·17	17·5	15·7	19·3	11·8	10·5	28·0	14·1	22·8	17·0	15·9	17·6	11·7	9·7	20·6	19·1	24·0	13·6	21·6	22·8	29·0	18·0	23·2	17·1	19·9	18·8	20·3	22·9	27·6	13·9
44	Nov.	2	47·3	8·50	17·5	15·8	11·6	15·1	17·1	22·0	15·5	21·5	15·8	14·6	14·7	16·4	15·3	20·8	18·7	22·3	16·9	14·3	25·0	32·0	15·7	22·5	18·0	18·8	19·9	22·3	22·2	28·2	13·9
45	„	9	47·3	8·50	18·1	16·2	15·0	19·2	15·5	26·0	16·6	19·0	18·2	18·4	15·4	16·4	12·2	21·1	21·8	23·3	13·6	21·3	23·2	24·5	19·7	22·5	24·6	18·1	21·0	19·1	24·9	25·0	17·6
46	„	16	46·8	8·22	18·3	17·4	19·3	14·0	13·8	23·3	12·1	15·2	16·9	17·3	13·2	13·2	11·7	19·4	23·2	26·7	22·0	15·8	19·8	28·5	17·4	17·4	24·4	19·9	18·7	13·0	26·8	24·6	15·3
47	„	23	44·9	7·17	18·2	16·5	8·6	19·6	17·1	30·7	18·2	20·2	18·0	16·6	16·9	12·7	16·3	18·5	20·9	24·7	18·0	15·4	21·5	23·0	20·2	21·9	23·8	22·6	18·2	20·1	26·0	26·9	10·6
48	„	30	37·6	3·11	19·0	17·4	15·0	13·7	11·6	32·0	16·6	23·4	18·0	14·6	16·0	19·1	15·8	22·1	24·6	27·4	17·8	19·1	17·2	19·0	14·1	23·2	20·0	22·5	20·4	25·1	30·3	21·7	19·0
49	Dec.	7	32·1	0·06	21·5	20·2	16·7	19·2	23·2	36·7	19·8	28·4	18·9	18·0	17·3	30·7	14·2	23·0	19·1	27·3	21·6	19·1	25·0	26·5	29·8	21·3	21·2	25·4	21·2	26·8	21·8	22·4	25·5
50	„	14	38·1	3·39	23·1	21·2	18·0	25·9	17·1	34·7	20·5	20·2	19·2	19·4	20·4	18·0	23·9	25·4	30·0	31·1	22·0	31·9	32·3	26·0	25·3	30·2	27·1	27·0	23·1	23·8	28·8	23·2	24·5
51	„	21	43·5	6·39	23·5	21·8	14·1	22·5	24·8	27·4	23·4	30·3	26·3	17·0	18·9	28·1	14·8	27·6	33·2	32·1	21·4	24·9	33·6	26·5	20·8	22·5	23·3	24·8	24·6	25·1	21·8	27·6	21·8
52	„	28	39·8	4·33	21·8	20·3	20·1	25·1	11·6	28·7	21·4	25·3	20·4	19·1	16·9	16·9	20·4	26·7	21·8	26·6	24·5	22·7	31·4	27·0	18·5	23·2	19·3	25·8	21·5	25·3	24·1	26·6	19·0

* *See* note (†) to Table 1.

TABLE 5.- **Births** and **Deaths** in 1889 in **Edinburgh, Glasgow,** and **Dublin,** and in **33 Colonial** and **Foreign Cities.**

CITIES.	POPULATION (enumerated or estimated).	BIRTHS. (Excluding Stillborn.)	DEATHS. (Excluding Stillborn.)	ANNUAL RATE per 1000 Persons living.		DEATHS FROM SOME ZYMOTIC DISEASES						
				Births.	Deaths.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœal Diseases
EDINBURGH	266,900	7389	4775	27·8	18·0	–	91	29	98	130	48	13
GLASGOW	528,144	19401	13064	36·9	24·8	–	641	111	176	840	145	40
DUBLIN	353,082	9866	9053	28·0	25·7	–	112	33	8	119	258	29
CALCUTTA	433,219	–	11551	–	26·7	71	32	–	20	10	3285	230
BOMBAY	773,196	15388	23307	20·0	30·2	310	636	?	?	?	7282	216
MADRAS	398,777	16315	17119	41·0	43·0	46	1203	?	?	?	4154	319
PARIS	2,260,945	61716	53008	27·4	23·5	129	1213	178	1690*	497	988	404
BRUSSELS (with Faubourgs).	471,606	13604	9126	28·9	19·4	2	111	2	28	95	83	98
AMSTERDAM	403,083	14047	8954	35·0	22·3	2	309	21	187	117	48	2
ROTTERDAM	197,723	7334	4594	37·2	23·3	–	173	4	11	38	11	5
THE HAGUE	153,440	5362	2974	35·1	19·4	–	10	–	8	53	13	1
COPENHAGEN	307,000	10920	6644	35·7	21·7	–	10	53	325	189	54	60
STOCKHOLM	228,218	7272	4546	32·0	20·0	–	–	120	147*	33	23	65
CHRISTIANIA	138,300	3412	2978	23·1	20·1	–	74	38	312	116	15	31
ST. PETERSBURG (with Faubourgs).	978,309		27674	–	28·4	32	446	606	315	234	840	407
MOSCOW	753,469	–	29865	–	39·6	19	370	462	604	195	337	718
BERLIN	1,489,672	46510	34193	31·3	23·0	3	190	240	1188	442	283	635
HAMBURG (State)	575,276	20895	13488	36·4	23·5	–	17	86	496*	226	240	166
DRESDEN	264,196	8368	5725	31·8	21·7	–	24	24	272*	–	23	71
BRESLAU	315,000	11424	9212	36·4	29·3	–	77	55	384*	75	36	129
MUNICH	281,000	10872	8671	38·8	31·0	1	201	112	401*	68	31	177
VIENNA	811,434	27321	19765	33·8	24·4	13	357	135	307	91	104	174
PRAGUE	304,356	–	8287	–	27·3	360	86	131	314	102	102	24
BUDA-PESTH	452,907	17152	13304	38·0	29·5	–	21	119	437	76	389	147
TRIESTE	158,084	–	4011	–	25·5	39	6	11	92*	12	25	23
ROME (50 weeks)	407,936	12333	9935	31·5	25·4	97	167	18	223	36	489‡	81
TURIN	306,398	8995	7372	29·4	24·1	14	229	26	111	96	113	80
VENICE	154,369	4398	4626	28·6	30·0	395	77	3	44*	26	49	49
CAIRO	374,838	20744	18848	55·5	50·5	186	101	–	113*	167	1105	654
ALEXANDRIA	231,396	10504	10215	45·5	44·3	68	192	8	61*	43	472	280
NEW YORK	1,571,300	–	39341	–	25·1	1	476	1259	1685	648	397	363
BROOKLYN	834,607	–	18282	–	22·0	–	207	275	1097	280	160	144
PHILADELPHIA	1,040,215	–	20536	–	19·8	–	92	307	375	146	726	109
BALTIMORE	500,343	–	8703	–	17·5	–	11	71	155	54	204	88
BOSTON	420,000	–	10259	–	24·4	2	48	23	564	96	186	71
ST. LOUIS	450,000	–	8004	–	17·8	–	63	114	345	55	146	43

* Including deaths from croup.

† Including 1080 deaths from cholera in Calcutta, 420 in Bombay, and 179 in Madras.
‡ Including 324 deaths from malarial fever.

ABLE 6.—LONDON.* Of the **Inhabitants enumerated** in 1871 and in 1881 respectively, the **Numbers of each Sex born** in LONDON, and **elsewhere.**

	MALES.		FEMALES.		EXCESS OF FEMALES.	
	1871.	1881.	1871.	1881.	1871.	1881.
TOTAL INHABITANTS - - -	1,523,151	1,797,486	1,731,109	2,018,937	207,958	221,511
BORN IN LONDON - - -	975,461	1,147,063	1,080,115	1,254,892	104,654	107,829
BORN OUT OF LONDON - - -	547,690	650,423	650,994	764,105	103,304	113,682

* This Table and Table 10 refer to London as constituted in 1881. The numbers therefore differ from those in other Tables in the Annual Summary, from which the hamlet of Mottingham is excluded; this hamlet was transferred from Registration London to the Outer Ring in 1887. The enumerated Population of London in 1881 included 2,401,955 of both sexes born in London and 1,414,528 born elsewhere.

TABLE 7.—GREATER LONDON.—**Area, Population, Inhabited Houses,** and **Rateable Value.**

	AREA (including Tidal Water).		ENUMERATED POPULATION, 1881.	DENSITY OF POPULATION in 1881.		INHABITED HOUSES, 1881.	RATEABLE VALUE,*	
	In Acres.	In Square Miles.		Persons to an Acre.	Persons to a Square Mile.		1881.	1889.
							£	£
GREATER LONDON -	448,334	701	4,766,661	10·6	6,800	645,695	32,854,916	38,998,017
INNER LONDON -	77,410	121	3,815,704	49·3	31,535	486,056	27,402,509	31,450,002
OUTER RING - -	370,924	580	950,957	2·6	1,640	159,639	5,452,407	7,548,015

* Supplied from the London County Council and Metropolitan Police Offices.

TABLE 8.—GREATER LONDON (THE METROPOLITAN AND CITY POLICE DISTRICTS).—**Population;** and **Births** and **Deaths** in the 52 Weeks of 1889.

	POPULATION, estimated to the middle of 1889.	ANNUAL RATE per 1000 living.			TOTAL BIRTHS.	TOTAL DEATHS.	The DEATHS registered in the 52 Weeks include									
							Deaths of		Deaths from							
		Births.	Deaths.	Principal Zymotic Diseases.			Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Deaths in Public Institutions.
GREATER LONDON	5,642,015	30·8	16·8	2·10	173,011	94,457	23,451	23,270	2	2730	973	1803	2122	765	3307	19719
REGISTRATION LONDON*	4,351,738	30·3	17·4	2·24	131,487	75,683	18,580	18,346	1	2314	784	1588	1749	596	2677	17660
OUTER RING†	1,290,277	32·3	14·6	1·62	41,524	18,774	4871	4924	1	416	189	305	373	169	630	2359

* See note (†) to Table 1.

TABLE 9.—**London.—Mortality** in **Five Groups** of **Districts**, and **Meteorology** at **Greenwich, 1840–1889.**

	London.	Groups of Districts.					Meteorology at Greenwich.			
		West.	North.	Central	East.	South.				
Area in Square Miles	121·0	16·8	31·0	8·5	9·3	70·4				
Decennial Increase of Population per Cent., 1871–81	17·3	19·3	20·5	−15·6 (decrease).	8·4	30·8				
Enumerated Population, 1881	3,815,704	669,633	905,947	282,238	692,738	1,265,148				
Density: Persons to an Acre 1841	25	27	28	172	63	11				
1871	42	52	56	150	107	21				
1881	49	62	67	127	116	28				
							Mean Temperature of Air.	Degree of Humidity. Saturation = 100.	Rainfall, in Inches.	Mean Hourly Horizontal Movement of the Air.*
Years.	Mean Rate of Mortality per 1000 in 50 Years.						Means in 49 Years, 1841–89.			
1840–1889	23·2	21·7	21·8	25·1	25·3	23·1	° 49·2	° 81	ins. 24·5	miles. 11·8 (40 yrs.)
	Means in Periods of Ten Years.						Means in Periods of Ten Years.			
1841–50	24·8	23·0	22·7	24·7	26·2	26·2	° 49·4	° 82	ins. 24·5	miles. —
1851–60	23·7	22·6	22·2	24·4	25·1	24·4	49·0	81	24·4	10·0
1861–70	24·4	22·7	23·6	26·5	26·9	23·4	49·6	81	23·9	10·8
1871–80	22·5	20·8	21·9	24·9	25·0	21·9	49·2	81	26·4	11·6
	Annual Rate of Mortality per 1000.						Meteorology in each Year.			
1840	25·0	24·1	23·9	24·5	25·7	25·9	° —	° —	ins. —	miles. —
1841	24·1	22·4	22·4	25·0	25·1	24·4	48·7	83	33·3	—
1842	23·6	22·6	22·6	23·6	24·4	23·9	49·6	84	22·6	—
1843	24·8	23·3	23·1	25·3	26·4	24·8	49·4	87	24·6	—
1844	25·1	23·9	23·3	24·4	25·9	25·6	48·6	83	24·9	—
1845	23·3	22·5	21·0	24·0	24·6	23·8	47·6	85	22·4	—
1846	23·4	21·6	21·9	22·9	24·1	24·6	51·3	83	25·3	—
1847	26·8	24·5	25·4	27·9	29·4	27·7	49·5	81	17·8	—
1848	25·7	23·6	23·4	25·3	28·7	27·2	50·4	79	30·2	—
1849	30·1	26·1	23·7	27·9	31·8	37·6	50·0	78	23·9	—
1850	21·0	19·6	19·8	21·1	21·7	21·9	49·3	79	19·7	11·0
1851	23·4	22·0	22·2	24·1	24·3	24·0	49·2	78	21·6	10·3
1852	22·5	21·5	21·2	23·9	23·3	23·0	50·6	76	34·2	10·6
1853	24·4	22·3	22·4	25·1	26·5	25·3	47·7	79	29·0	9·5
1854	29·4	28·5	24·4	27·4	30·0	34·8	48·9	83	18·7	10·3
1855	24·3	23·0	23·3	25·1	25·5	24·6	47·1	83	21·1	9·9
1856	22·0	21·5	21·1	23·0	23·3	21·8	49·0	83	22·2	10·6
1857	22·4	21·2	21·5	23·8	24·6	21·5	51·0	83	21·4	9·3
1858	23·9	22·4	23·9	24·5	25·8	24·0	49·2	79	17·8	9·7
1859	22·7	21·4	21·7	24·1	24·0	22·6	50·7	80	25·9	9·5
1860	22·4	22·2	21·2	23·3	24·1	22·1	47·0	84	32·0	10·0
1861	23·2	22·1	22·3	25·4	24·0	22·8	49·4	84	20·8	9·9
1862	23·6	22·0	22·0	26·2	26·0	22·7	49·5	84	26·2	10·0
1863	24·5	22·9	23·8	26·9	26·5	23·3	50·3	80	20·0	10·3
1864	20·4	24·4	25·3	29·5	29·0	25·3	48·5	78	16·7	9·5
1865	24·5	22·6	24·5	27·1	26·5	23·2	50·3	80	29·0	9·3
1866	26·5	22·6	25·3	27·1	34·0	24·1	49·8	82	30·5	11·4
1867	23·0	21·7	23·1	24·8	24·2	22·1	48·6	82	28·4	11·8
1868	23·5	22·2	22·7	25·2	25·4	22·9	51·6	78	25·2	12·2
1869	24·6	24·2	23·5	26·6	27·9	23·8	49·5	81	24·0	12·2
1870	24·1	23·8	23·5	26·0	25·0	23·4	48·7	79	18·5	11·1
1871	24·6	22·5	25·6	25·0	26·1	24·0	48·7	81	22·3	10·5
1872	21·5	19·6	21·2	23·6	23·6	20·7	50·7	82	30·0	11·9
1873	22·4	20·5	21·2	25·1	25·3	21·7	48·9	83	23·4	11·8
1874	22·4	20·9	21·7	25·7	25·5	21·0	49·4	82	20·0	11·5
1875	23·6	22·2	22·2	26·2	25·7	23·3	49·4	80	27·3	11·5
1876	21·9	21·0	21·2	24·1	24·0	21·2	50·1	80	23·9	12·1
1877	21·6	19·2	21·5	24·2	24·5	20·5	49·7	79	28·8	13·0
1878	23·1	21·6	22·0	25·2	25·1	23·0	49·6	81	29·2	11·1
1879	22·6	20·9	21·5	26·3	25·5	21·8	46·2	83	31·8	11·3
1880	21·7	19·8	20·8	23·8	24·3	21·3	49·4	84	29·7	11·7
1881	21·3	19·6	20·6	23·5	24·2	20·5	48·8	81	25·2	12·1
1882	21·3	19·8	19·6	24·4	25·2	20·6	49·7	84	25·1	12·8
1883	20·5	19·5	19·0	24·1	24·1	19·5	49·4	82	21·9	12·1
1884	20·4	19·2	19·0	24·9	22·9	19·7	50·7	80	18·1	11·9
1885	19·8	19·2	18·5	24·4	22·5	18·5	48·6	81	24·0	12·0
1886	19·9	19·0	18·0	25·4	23·2	19·1	48·7	81	24·2	11·8
1887	19·6	19·0	17·8	26·1	22·5	18·6	47·8	79	19·9	11·5
1888	18·5	18·3	16·5	25·7	21·8	17·2	47·7	82	27·5	12·3
1889	17·4	17·0	15·7	24·1	20·2	16·6	48·8	83	23·3	10·2

NOTE.—The populations upon which these rates of mortality have been calculated are deduced from the numbers enumerated at the five Censuses of 1841, 1851, 1861, 1871, and 1881. The deaths used for the 49 years 1840–88 are for the calendar years, while those for 1889 are the numbers registered in the 52 weeks ending 28th December 1889.

Hampstead and Lewisham did not form part of Registration London prior to 1847. Wandsworth was not included in Registration London until the commencement of 1844, but the facts for that district have been included, in calculating the rates in the above Table, for the years 1840–43. The hamlet of Mottingham was transferred from Lewisham District to the Outer Ring on 1st April 1887.

Certain changes affecting the West and Central groups of districts were made in the year 1868, but no corrections for these changes have been made in this Table for any year prior to 1861.

* Approximated to the results of Robinson's anemometer by reduction from Whewell's, up to 1859.

TABLE 10.—LONDON*: Population at different Ages, as enumerated in 1851, 1861, 1871, and 1881, with the Numbers of Males and Females at the various Ages in 1881.

—	All Ages.	0–	5–	10–	15–	20–	25–	35–	45–	55–	65–	75–	85 & upwds.
1851	2,362,236	293,562	243,648	216,369	213,694	241,401	428,123	308,949	208,363	122,946	62,608	19,845	2,728
1861	2,803,989	362,296	300,259	264,249	259,155	277,389	476,802	366,417	246,918	149,503	74,039	23,721	3,141
1871	3,254,260	422,629	349,686	309,658	307,075	321,585	551,973	404,954	290,977	174,295	90,198	27,604	3,626
1881	3,816,483	497,044	419,740	366,111	368,628	385,236	641,265	471,131	320,530	205,921	103,815	32,982	4,080
Males –	1,797,486	248,619	208,193	179,483	171,659	176,186	297,085	222,417	147,616	90,992	42,139	11,877	1,220
Females –	2,018,997	248,425	211,547	186,628	196,969	209,050	344,180	248,714	172,914	114,929	61,676	21,105	2,860

* In England the proportion of Females to Males in the population in 1881 was as 105 to 100; in London it was as 112 to 100. ese proportions correspond with those that prevailed in 1871. *See also* note * to Table 6.

TABLE 11.—LONDON: Marriages, Births, and Deaths, 1875-1889.

Years.		1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.	1884.	1885.	1886.	1887.	1888.	1889 (52 weeks).
Marriages – –		34,072	34,007	33,593	33,711	33,477	34,144	34,578	35,612	35,379	35,381	34,560	34,482	34,251	34,635	35,484
Births –	Persons	123,266	127,444	128,092	129,765	131,542	133,310	132,904	133,309	134,503	135,651	132,952	134,339	133,359	131,761	131,487
	Males –	62,782	65,058	65,477	66,241	66,445	67,985	67,556	67,958	68,449	69,106	67,934	68,507	67,539	66,919	67,067
	Females	60,484	62,386	62,615	63,524	65,097	65,325	65,343	65,351	66,054	66,545	65,028	65,832	65,790	64,842	64,420
Deaths* –	Persons	82,069	77,762	77,543	84,298	83,964	81,957	81,431	83,015	81,108	82,383	80,946	82,682	82,449	79,246	75,683
	Males –	42,118	40,126	40,047	43,100	42,920	42,038	41,742	42,141	41,713	42,529	41,263	42,252	42,205	40,496	38,749
	Females	39,951	37,636	37,496	41,198	41,044	39,919	39,689	40,874	39,395	39,854	39,683	40,430	40,244	38,750	36,934
Excess of Births over Deaths –		41,197	49,682	50,549	45,467	47,578	51,353	51,473	50,294	53,395	53,268	52,006	51,657	50,910	52,515	55,804
Annual Rates per 1000.	Persons Married	19·6	19·2	18·7	18·5	18·0	18·1	18·1	18·3	17·9	17·6	16·9	16·6	16·3	16·1	16·3
	Births –	35·4	35·9	35·6	35·5	35·5	35·3	34·7	34·2	34·0	33·7	32·6	32·4	31·6	30·7	30·3
	Deaths*	23·6	21·9	21·6	23·1	22·6	21·7	21·3	21·3	20·5	20·4	19·3	19·9	19·6	18·5	17·4

NOTE.—The figures in the above table, except those for 1889, relate to the calendar year ending 31st December. The figures for 889 relate to the 52 weeks ending 28th December.

TABLE 12.—LONDON. **Population,** and **Zymotic** and

PERIOD AND YEAR.	ESTIMATED POPULATION.	DEATHS FROM PRINCIPAL ZYMOTIC DISEASES.									
		Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhœa and Dysentery.	Cholera.
Cols. - 1	2	3	4	5	6	7	8	9	10	11	12
Period.											
1838-40	1,803,004	5,686	3,756	5,977		4,313	7,159			1,475	111
(3 Years.)											
1841-50	2,103,487	8,416	13,011	18,314		18,079	20,890			16,926	15,588
1851-60	2,570,489	7,150	13,766	26,317		22,497	22,597			26,362	12,886
1861-70	3,018,193	8,347	17,338	34,391	5,323	26,550	27,149			31,578	7,403
1871-80	3,513,843	15,539	17,947	21,247	4,319	28,728	1,887	8,536	2,579	33,168	1,328
1840	1,840,091	1235	1132	1954		1069	1262			522	60
1841	1,878,205	1053	973	663		2278	1151			543	28
1842	1,917,108	360	1293	1224		1603	1184			855	118
1843	1,954,041	438	1442	1867		1908	2094			1005	85
1844	2,033,816	1804	1182	3029		1292	1721			831	65
1845	2,073,298	909	2318	1085		1816	1324			940	43
1846	2,113,535	257	747	928		2035	1838			2308	228
1847	2,202,673	955	1778	1433		1600	3297			2283	117
1848	2,244,837	1620	1144	4767		1630	3685			2247	652
1849	2,287,302	521	1154	2149		2349	2564			3837	14,125
1850	2,330,054	499	980	1169		1568	2032			2077	127
1851	2,373,081	1062	1297	1285		2185	2374			2755	213
1852	2,416,367	1159	595	2571		1569	2183			2513	162
1853	2,459,899	211	978	2016		2667	2617			2649	883
1854	2,503,662	694	1409	3477		2502	2816			3325	10,738
1855	2,547,639	1039	878	2611		2488	2460			2190	149
1856	2,591,815	531	1479	1819		2092	2717			2414	152
1857	2,636,174	156	1341	1599		2527	2195			3298	214
1858	2,680,700	142	2369	4184		2708	1919			2220	131
1859	2,725,374	1158	1330	3481	773	1742	1840			3513	193
1860	2,770,181	898	2099	2017	484	2067	1476			1485	51
1861	2,815,101	217	1062	2381	674	3548	1848			2740	168
1862	2,860,117	366	2334	3492	730	2168	3673			1839	106
1863	2,905,210	1996	1634	4955	799	2175	2871			2492	159
1864	2,950,361	547	2788	3244	611	2423	3782			3013	156
1865	2,995,551	640	1290	2179	431	2935	3217			3721	196
1866	3,040,761	1391	2220	1892	462	2960	2688			3294	5596
1867	3,085,971	1345	1143	1451	447	2278	2184			3060	240
1868	3,131,160	597	1962	2916	495	2338	2468			4110	324
1869	3,176,308	275	1456	5841	340	3769	716	1069	615	3495	219
1870	3,221,394	973	1449	6040	334	1956	472	976	570	3814	239
1871	3,267,251	7912	1427	1902	344	2201	384	871	436	3968	221
1872	3,319,736	1786	1680	918	267	3259	174	807	322	3588	181
1873	3,373,065	113	2149	645	320	2620	277	908	325	3950	162
1874	3,427,250	57	1680	2648	419	1867	312	879	337	3201	123
1875	3,482,306	46	1403	3677	581	3204	128	817	272	3289	108
1876	3,538,246	736	1720	2308	387	2737	159	769	202	3585	135
1877	3,595,085	2551	2387	1580	316	1817	157	901	194	2421	88
1878	3,652,837	1417	1500	1808	566	4483	151	1033	197	3534	124
1879	3,711,517	450	2475	2661	575	2934	71	849	160	1894	53
1880	3,771,139	471	1521	3100	544	3516	74	702	134	3738	133
1881	3,831,719	2367	2536	2114	657	1973	92	971	134	3055	95
1882	3,893,272	430	2358	2006	857	4682	53	975	95	2144	79
1883	3,955,814	136	2441	2006	952	1598	55	963	102	2652	83
1884*	4,019,361	1236	2271	1430	951	3156	32	925	78	3903	163
1885*	4,083,928	1419	2909	722	904	2481	28	597	78	2723	77
1886*	4,149,533	24	2086	690	851	2871	13	618	73	3996	137
1887*	4,215,192	9	2904	1443	953	2935	19	612	44	3801	107
1888*	4,282,921	9	2425	1214	1311	2993	9	694	35	2206	54
1889*	4,351,738	1	2314	784	1588	1749	15	538	43	2677	62

NOTE.—Wandsworth was not included in Registration London until 1844, nor Lewisham and throughout, but the population in each year refers

For the years 1840-50 the numbers of deaths from the various diseases are derived from summaries of 10 calendar years. The

Infant Mortality in 50 Years 1840-89.

Annual Mortality, to 1,000 Persons living, from principal Zymotic Diseases.										Annual Mortality of Infants under One Year of Age to 1000 Births.	Period and Year.
Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and Ill-defined Fever.	Diarrhœa and Dysentery.	Cholera.		
13	14	15	16	17	18	19	20	21	22	23	24
											Period.
1·06	0·69	1·10		0·80		1·34		0·27	0·02	—	1838-40 (3 years.)
0·40	0·62	0·86		0·87		0·98		0·78	0·69	157	1841-50
0·28	0·53	1·02		0·88		0·89		1·03	0·52	155	1851-60
0·28	0·58	1·13	0·18	0·88		0·91		1·04	0·24	162	1861-70
0·46	0·51	0·60	0·12	0·82	0·05	0·24	0·08	0·95	0·04	158	1871-80
0·67	0·62	1·07		0·58		0·69		0·29	0·03	—	1840
0·56	0·52	0·35		1·22		0·62		0·29	0·02	160	1841
0·19	0·68	0·64		0·84		0·62		0·45	0·06	157	1842
0·23	0·74	0·96		0·93		1·08		0·52	0·04	163	1843
0·89	0·58	1·49		0·64		0·85		0·41	0·03	152	1844
0·44	1·12	0·53		0·88		0·64		0·45	0·02	149	1845
0·12	0·36	0·44		0·97		0·87		1·10	0·11	157	1846
0·43	0·80	0·64		0·72		1·47		1·02	0·05	166	1847
0·72	0·51	2·13		0·73		1·65		1·00	0·29	158	1848
0·23	0·51	0·94		1·03		1·13		1·68	6·20	169	1849
0·21	0·42	0·50		0·68		0·88		0·89	0·05	140	1850
0·45	0·55	0·54		0·92		1·00		1·16	0·09	154	1851
0·48	0·25	1·06		0·65		0·90		1·04	0·07	151	1852
0·09	0·40	0·82		1·08		1·06		1·08	0·36	158	1853
0·28	0·56	1·39		1·00		1·12		1·33	4·29	164	1854
0·41	0·35	1·02		0·96		0·97		0·86	0·06	152	1855
0·20	0·57	0·70		0·81		1·05		0·93	0·06	150	1856
0·06	0·51	0·61		0·96		0·83		1·25	0·08	156	1857
0·09	0·88	1·56		1·01		0·72		0·83	0·05	160	1858
0·43	0·49	1·28	0·28	0·64		0·68		1·29	0·07	150	1859
0·32	0·75	0·73	0·17	0·74		0·53		0·54	0·02	153	1860
0·08	0·38	0·85	0·24	1·26		0·66		0·97	0·06	155	1861
0·13	0·82	1·22	0·26	0·76		1·28		0·64	0·04	143	1862
0·69	0·56	1·71	0·28	0·75		0·99		0·86	0·05	151	1863
0·19	0·94	1·10	0·21	0·82		1·28		1·02	0·05	169	1864
0·21	0·43	0·73	0·14	0·98		1·07		1·24	0·07	171	1865
0·46	0·73	0·62	0·15	0·97		0·88		1·08	1·84	172	1866
0·44	0·37	0·47	0·15	0·74		0·71		0·99	0·08	159	1867
0·19	0·62	0·93	0·16	0·75		0·79		1·31	0·10	166	1868
0·09	0·46	1·84	0·11	1·19	0·23	0·34	0·19	1·10	0·07	170	1869
0·80	0·45	1·88	0·10	0·61	0·15	0·30	0·18	1·18	0·07	164	1870
2·42	0·44	0·58	0·11	0·70	0·12	0·27	0·13	1·21	0·07	171	1871
0·54	0·50	0·28	0·08	0·98	0·05	0·24	0·10	1·08	0·05	158	1872
0·03	0·64	0·19	0·09	0·78	0·08	0·27	0·10	1·17	0·05	160	1873
0·02	0·49	0·77	0·12	0·54	0·09	0·26	0·10	0·93	0·04	156	1874
0·01	0·40	1·06	0·17	0·92	0·04	0·23	0·08	0·94	0·03	162	1875
0·21	0·48	0·65	0·11	0·77	0·04	0·22	0·06	1·01	0·04	157	1876
0·71	0·66	0·44	0·09	0·51	0·04	0·25	0·05	0·67	0·02	146	1877
0·39	0·41	0·49	0·15	1·23	0·04	0·28	0·05	0·97	0·03	164	1878
0·12	0·67	0·72	0·15	0·79	0·02	0·23	0·04	0·51	0·01	148	1879
0·12	0·40	0·82	0·14	0·93	0·02	0·19	0·04	0·99	0·04	158	1880
0·62	0·66	0·55	0·17	0·51	0·02	0·25	0·03	0·80	0·02	148	1881
0·11	0·60	0·52	0·22	1·20	0·01	0·25	0·02	0·55	0·02	151	1882
0·03	0·62	0·51	0·24	0·40	0·01	0·24	0·03	0·67	0·02	146	1883
0·31	0·56	0·35	0·24	0·78	0·01	0·23	0·02	0·97	0·04	156	1884
0·35	0·71	0·18	0·22	0·61	0·01	0·15	0·02	0·67	0·02	148	1885
0·01	0·50	0·17	0·21	0·69	0·00	0·15	0·02	0·96	0·03	159	1886
0·00	0·69	0·34	0·23	0·70	0·00	0·14	0·01	0·90	0·03	158	1887
0·00	0·56	0·28	0·31	0·70	0·00	0·16	0·01	0·51	0·01	146	1888
0·00	0·53	0·18	0·37	0·40	0·00	0·12	0·01	0·62	0·01	141	1889

Hampstead until 1847; thus the figures in the above Table do not relate to the same area to the same area as the facts in the other columns.

52 or 53 weeks; the numbers for the 38 years 1851-88 are derived from the Annual Reports, and relate figures for 1889 are for 52 weeks.

* *See* note (†) Table 1.

TABLE 13.—**Causes of Deaths** REGISTERED in **London** in each of the 11 Years 1879–1889, and in each Quarter of 1889.

YEARS	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889.	1889. QUARTER ENDING Mar. 30	June 29	Sept. 28	Dec. 28
CAUSES OF DEATH.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	364* Days.	91 Days	91 Days	91 Days	91 Days
ALL CAUSES	85540	81128	81071	82905	80578	‡ 83388	‡ 80504	‡ 82276	‡ 82208	‡ 78843	‡ 75 83	‡ 21138	‡ 17544	‡ 17881	‡ 19329
Small-pox { Vaccinated / Unvaccinated / No statement }	458	475	2371	{ 108 / 184 / 139	42 / 55 / 37	380 / 417 / 454	398 / 503 / 502	9 / 8 / 7	1 / 1 / 7	5 / - / 4	- / - / 1	- / - / -	- / - / -	- / - / -	- / - / 1
Measles	2488	1501	2533	2329	2420	2285	2928	2078	2891	2491	2314	1106	667	218	323
Scarlet Fever	2706	3073	2108	2004	1989	1444	707	688	1447	1209	784	182	149	191	262
Typhus	70	72	96	52	56	31	28	13	18	10	15	2	1	5	7
Relapsing Fever†	-	-	-	1	-	1	-	1	-	-	1	-	-	-	1
Influenza	9	11	8	6	11	6	3	5	5	3	5	2	1	1	1
Whooping-cough	3000	3438	1961	4647	1582	3188	2479	2834	2928	2087	1749	452	541	309	456
Diphtheria	592	541	654	863	951	973	896	846	961	1301	1588	355	318	467	448
Simple & Ill-defined Fever	168	125	123	90	90	78	82	70	48	33	43	7	17	9	10
Enteric Fever	861	689	977	975	935	936	585	618	606	677	538	105	85	146	202
Simple Cholera	54	134	95	79	83	163	79	137	106	54	62	4	2	54	2
Diarrhœa, Dysentery	1966	3823	3053	2162	2644	3781	2657	3950	3773	2176	2677	189	269	1935	284
Remittent Fever†	-	-	-	21	17	20	16	20	14	9	12	1	3	6	2
Hydrophobia	2	3	5	4	8	9	27	9	2	3	7	1	1	5	-
Glanders	5	3	2	1	1	-	1	2	4	1	2	-	-	1	1
Cowpox and Vaccination†	-	-	-	14	12	12	7	4	9	4	11	3	3	1	4
Venereal Affections	538	537	551	517	583	537	543	544	498	516	544	133	109	163	139
Erysipelas	244	340	353	347	324	381	328	257	341	249	189	34	46	39	70
Pyæmia Septicæmia†	-	-	-	167	147	159	148	134	155	152	105	26	29	21	29
Puerperal Fever	194	268	332	287	307	327	323	279	328	275	222	41	58	55	68
Other Zymotic Diseases†	-	-	-	85	98	102	104	70	100	76	81	16	26	17	22
Thrush	166	185	178	112	127	119	112	113	80	63	83	20	25	27	11
Worms and other Parasitical Diseases	17	32	23	26	17	17	17	18	22	14	14	3	4	3	4
Starvation, Want of Breast Milk†	-	-	-	127	99	87	92	91	77	61	92	26	17	27	22
Alcoholism, Delirium Tremens	215	164	198	226	283	243	180	220	248	298	386	89	95	111	91
Rheumatic Fever, Rheumatism of Heart	445	467	601	{ 338	384	444	416	362	418	297	331	78	73	75	105
Rheumatism				{ 160	145	140	129	104	115	108	151	31	34	30	56
Gout	187	189	162	149	136	163	176	139	157	128	144	52	40	35	37
Rickets†	-	-	-	113	166	190	170	218	180	230	230	57	72	62	39
Cancer	2165	2229	2358	2442	2547	2623	2624	2688	2874	2856	2982	732	752	737	761
Tabes Mesenterica	1468	1630	1384	1370	1421	1594	1424	1591	1406	1249	1261	259	285	488	229
Tubercular Meningitis	1618	1629	1569	1252	1420	1316	1325	1253	1245	1220	1189	294	333	297	265
Phthisis	8800	8029	8312	8409	8917	8381	8372	8332	7740	7459	7748	1964	1939	1787	2058
Scrofula, Tuberculosis	690	734	698	749	788	994	890	954	912	862	896	227	235	240	194
Other Constitutional Dis. †	-	-	-	379	508	515	517	521	542	546	528	138	125	106	159
Premature Birth	1398	1565	1489	1745	1861	1911	1837	1930	1975	1938	2025	547	501	484	493
Atelectasis†	-	-	-	100	136	126	150	128	138	161	127	26	31	30	40
Congenital Malformations	346	348	338	325	328	353	376	319	352	345	367	100	81	98	88
Old Age	2866	2495	2568	2554	2730	2473	2552	2651	2458	2485	2591	709	579	581	666
Apoplexy	2363	2250	2345	2085	1993	2141	2149	2133	2068	2236	2078	585	503	426	564
Epilepsy	396	334	373	345	333	378	346	369	345	365	360	94	91	92	81
Convulsions	2582	2445	2264	2563	2549	2602	2345	2390	2379	2392	2263	600	515	583	505
Other Diseases of Brain, &c.	4341	4135	4091	4078	4481	4440	4313	4462	4465	4364	4156	1186	1092	923	955
Diseases of Organs of Special Sense†	-	-	-	86	135	121	112	138	98	116	114	29	28	31	26
Diseases of Circulatory System	4871	4548	4865	5204	5394	5472	5755	6117	6291	6459	6460	1878	1507	1534	1741

* For comparison of the numbers in 1889 with the corrected averages for the ten years 1879-88, see Table 14.
† In consequence of changes of classification, the deaths from these diseases cannot be given for years prior to 1882.
‡ *See* note (†), Table 1.

TABLE 13 (*cont.*)—**Causes** of **Deaths** REGISTERED in **London** in each of the 11 Years 1879–1889; and in each Quarter of 1889.

YEARS	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1889. QUARTER ENDING Mar. 30	June 29	Sept. 28	Dec. 28
CAUSES OF DEATH.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	364* Days.	91 Days	91 Days	91 Days	91 Days
Croup	577	570	695	873	827	751	674	523	597	494	480	154	83	93	150
Bronchitis	14212	11138	9374	11003	10011	9211	10352	11282	10326	10185	8970	3497	1562	1048	2863
Pneumonia	5130	4173	4167	4554	4131	4254	4642	4661	4797	4657	4061	1259	1008	605	1189
Pleurisy	268	241	240	269	242	261	327	261	326	267	239	70	65	43	61
Other Diseases of Respiratory System	2141	1841	1792	1695	1511	1484	1563	1587	1535	1495	1311	460	270	194	387
Dentition	732	660	653	705	768	796	766	693	623	603	545	155	147	132	111
Sore Throat, Quinsy†	–	–	–	115	115	102	98	89	107	102	92	24	22	25	21
Enteritis	337	429	442	373	364	336	365	518	509	464	570	87	96	280	107
Peritonitis	281	299	371	347	336	340	359	325	338	334	352	94	73	97	88
Diseases of Liver	1461	1513	1514	1529	1496	1555	1432	1524	1462	1330	1321	320	335	349	317
Others, Digestive System	1339	1342	1377	1424	1500	1662	1468	1561	1490	1530	1425	334	341	415	335
Diseases of Lymphatic System and Ductless Glands†	–	–	–	78	100	105	84	115	95	95	108	21	30	25	32
Diseases of Urinary System	1604	1600	1677	1732	1985	1878	1955	2049	2100	2116	2020	551	513	433	523
Diseases of Generative System	278	229	277	317	293	315	273	284	297	270	243	54	56	68	75
Accidents of Childbirth	245	253	228	225	180	193	182	200	163	169	166	50	38	37	41
Diseases of Locomotive System†	–	–	–	433	393	381	357	389	345	368	375	93	90	89	103
Diseases of Integumentary System†	–	–	–	245	253	279	256	273	273	258	217	59	52	54	52
ACCIDENT OR NEGLIGENCE.‡															
Fractures and Contusions	963	897	1030	1034	1076	1065	985	970	1025	994	981	220	248	235	248
Wounds { Gunshot	8	7	8	3	2	7	6	13	4	5	6	–	2	3	1
Wounds { Cut, Stab	19	21	19	25	14	27	18	10	13	17	17	2	3	5	7
Burns and Scalds	318	238	275	249	280	288	299	285	327	314	297	95	54	47	101
Poison	67	58	77	71	79	60	77	63	64	67	78	20	18	20	20
Drowning	311	326	337	351	360	305	233	325	326	268	319	60	85	113	61
Suffocation	630	605	646	643	626	601	574	595	639	718	691	203	170	135	183
Otherwise	154	128	184	126	115	165	111	132	150	123	84	15	23	31	17
Battle	–	–	–	2	–	1	–	–	–	–	–	–	–	–	–
HOMICIDE.‡															
Murder and Manslaughter	88	89	87	83	75	70	62	68	80	76	79	17	19	25	18
SUICIDE.‡															
Wounds { Gunshot	28	25	28	29	39	42	35	39	53	48	43	8	14	10	11
Wounds { Cut, Stab	77	69	83	61	61	80	67	87	84	65	78	18	18	22	20
Poison	70	74	70	62	81	70	84	93	71	112	78	23	26	16	13
Drowning	64	67	59	64	61	71	42	65	76	52	60	9	21	18	12
Hanging	100	85	83	99	95	71	77	89	75	86	75	21	26	19	9
Otherwise	33	32	39	27	31	33	40	29	39	37	39	10	9	11	9
(EXECUTION.)															
Hanging	3	4	–	2	2	2	4	–	2	1	1	1	–	–	–
ALL OTHER CAUSES†	–	–	–	3458	3438	3500	3045	3258	3060	2923	2784	700	543	878	663

* For comparison of the numbers in 1889 with the corrected averages for the ten years 1879–88, see Table 14.

† In consequence of changes of classification, the deaths from these diseases cannot be given for years prior to 1882.

‡ The evidence at inquests is often insufficient to enable the coroner to certify whether a violent death resulted from accident, murder, manslaughter, or suicide. All such cases are classed under "accident or negligence."

TABLE 14.—**Deaths** in several groups of **Ages** and from different **Causes** REGISTERED in **London** during the 52 Weeks of 1889.

CAUSES OF DEATH.	Corrected* Annual Averages, 1879-88.	TOTAL AT ALL AGES.	Under 5 Years.		5 and under 20.	20 and under 40.	40 and under 60.	60 and under 80.	80 and upwds.
			Under 1 Year.	1–5.					
ALL CAUSES‖	88,906·6	75,683	18,580	11,775	4523	9261	13,198	15,028	3318
Small-pox † Vaccinated	713·1	-	-	-	-	-	-	-	-
Small-pox † Unvaccinated		-	-	-	-	-	-	-	-
Small-pox † No Statement		1	-	-	-	-	1	-	-
Measles	2,491·6	2314	443	1701	164	5	1	-	-
Scarlet Fever	1887·4	784	51	504	211	16	1	1	-
Typhus	48·4	15	-	-	5	5	3	2	-
Relapsing Fever	0·5‡	1	-	-	-	-	1	-	-
Influenza	7·3	5	3	-	-	-	-	2	-
Whooping-cough	3155·0	1749	687	1004	56	1	-	1	-
Diphtheria	931·8	1584	90	965	481	37	12	3	-
Simple and Ill-defined Fever	98·5	43	4	12	10	3	7	6	1
Enteric Fever	853·7	538	3	29	162	253	78	13	-
Simple Cholera	105·9	62	34	14	2	4	4	3	1
Diarrhœa, Dysentery	3257·2	2677	1939	404	14	21	35	155	59
Remittent Fever	17·8‡	12	-	7	1	2	2	-	-
Hydrophobia	7·-	7	-	-	5	-	2	-	-
Glanders	2·2	2	-	-	-	-	2	-	-
Cowpox and Vaccination	9·4‡	11	11	-	-	-	-	-	-
Venereal Affections	58·7	544	364	43	-	44	51	41	1
Erysipelas	343·7	189	64	3	8	24	34	46	10
Pyæmia, Septicæmia	161·2‡	105	17	7	18	32	21	10	-
Puerperal Fever	317·2	222	-	-	8	201	13	-	-
Other Zymotic Diseases	96·4‡	81	17	33	8	10	6	7	-
Thrush	136·3	83	81	2	-	-	-	-	-
Worms & other Parasitical Diseases	22·1	14	-	3	1	6	4	-	-
Starvation, Want of Breast-milk	96·2	92	85	1	-	3	2	1	-
Alcoholism, Delirium Tremens	247·1	386	-	-	-	150	201	35	-
Rheumatic Fever, Rheumatism of Heart	562·0	331	1	9	121	102	69	29	-
Rheumatism		131	-	2	4	16	35	71	5
Gout	173·4	164	-	-	-	4	63	88	9
Rickets	193·3‡	230	89	137	2	1	1	-	-
Cancer	2749·8	2982	7	14	20	267	1382	1204	78
Tabes Mesenterica	1588·3	1261	774	340	86	36	12	3	-
Tubercular Meningitis	1504·2	1189	539	584	222	32	8	4	-
Phthisis	9043·4	7748	104	161	631	3643	2678	539	92
Scrofula, Tuberculosis	898·5	896	324	270	131	101	47	21	2
Other Constitutional Diseases	535·4‡	528	28	16	40	94	163	175	12
Premature Birth	1917·2	2025	2025	-	-	-	-	-	-
Atelectasis	142·2‡	127	127	-	-	-	-	-	-
Congenital Malformations	372·6	347	339	19	5	4	-	-	-
Old Age	280·1	2 91	-	-	-	-	2	1250	1359
Apoplexy	2330·8	2078	21	9	13	115	430	1097	193
Epilepsy	389·3	360	13	14	40	102	90	90	11
Convulsions	2662·4	2203	1896	296	11	-	-	-	-
Other Diseases of Brain, &c.	4754·7	4156	591	685	322	518	669	1357	234
Diseases of Organs of Special Sense	122·3	114	33	25	26	19	4	6	1
Diseases of Circulatory System	5950·1	6160	81	62	351	982	2037	2575	379

* The annual averages have been raised for increase of population between the period 1879–88, and the year 1889, and reduced for comparison with the deaths recorded in the 52 weeks of 1889; *see* also note ‡. For the population in each group of ages, estimated to the middle of 1889, *see* Table 19.

† Those cases of small-pox only are returned as "Vaccinated" or as "Unvaccinated" which are so certified by registered medical men. When the medical attendant does not certify that the deceased has, or has not, been vaccinated, or when the cause of death is not certified by a registered practitioner, the case is returned under the heading "No Statement."

‡ In consequence of changes of classification, the deaths from those diseases in years prior to 1882 cannot be ascertained; the corrected averages are therefore derived from the figures for the seven years 1882–88 only.

‖ *See* note ‖, Table 1.

TABLE 14 (*continued*).—**Deaths** in several groups of **Ages** and from different **Causes** REGISTERED in **London** during the 52 Weeks of 1889.

CAUSES OF DEATH.	Corrected* Annual Averages, 1879–88.	TOTAL AT ALL AGES.	Under 5 Years.		5 and under 20.	20 and under 40.	40 and under 60.	60 and under 80.	80 and upwds.
			Under 1 Year.	1–5.					
Croup	714·9	480	51	357	71	–	–	1	–
Bronchitis	11676·9	8970	2277	1539	101	223	1229	2979	602
Pneumonia	4928·9	4061	954	1198	193	486	618	564	65
Pleurisy	298·6	209	11	28	13	59	65	55	8
Other Diseases of Respiratory System	1807·6	1311	233	213	71	79	281	331	53
Dentition	760·3	545	320	225	–	–	–	–	–
Sore Throat, Quinsy	110·2‡	92	12	47	12	9	11	1	–
Enteritis	449·4	570	302	44	46	50	46	77	5
Peritonitis	357·4	352	14	16	88	93	85	55	1
Diseases of Liver	1609·4	1321	93	10	16	185	465	414	35
Others, Digestive System	1589·6	1425	304	82	81	191	325	337	55
Disease of Lymphatics, &c.	102·0‡	103	5	11	18	30	27	16	1
Diseases of Urinary System	2030·9	2020	16	42	90	336	706	743	87
Diseases of Generative System	307·6	253	7	6	5	92	102	40	1
Accidents of Childbirth	221·4	166	–	–	4	142	20	–	–
Diseases of Locomotive System	404·6‡	375	15	30	141	76	64	44	5
Diseases of Integumentary System	278·8‡	217	30	11	2	10	31	65	18
(ACCIDENT OR NEGLIGENCE.)†									
Fractures and Contusions	1090·5	981	19	103	153	194	249	215	48
Wounds { Gunshot	6·8	6	1	–	3	1	1	–	–
Wounds { Cut, Stab	19·9	17	–	1	3	4	5	4	–
Burns and Scalds	312·1	297	22	133	57	26	20	32	7
Poison	74·2	78	4	12	3	18	33	8	–
Drowning	241·3	319	8	13	102	99	77	20	–
Suffocation	681·9	691	609	25	10	11	21	14	1
Otherwise	151·9	85	35	3	8	13	20	7	–
(BATTLE.)									
Gunshot Wounds	·3	–	–	–	–	–	–	–	–
(HOMICIDE.)†									
Murder and Manslaughter	84·5	79	37	–	3	24	12	3	–
(SUICIDE.)†									
Wounds { Gunshot	39·8	43	–	–	3	20	17	3	–
Wounds { Cut, Stab	79·7	78	–	–	–	28	31	16	3
Poison	85·5	78	–	–	7	30	29	12	–
Drowning	67·5	60	–	–	6	24	20	9	1
Hanging	90·2	75	–	–	2	14	38	21	–
Otherwise	36·9	39	–	–	4	12	13	10	–
(EXECUTION.)									
Hanging	2·2	1	–	–	–	1	–	–	–
All Other Causes	3442·4‡	2784	2413	173	12	18	76	77	15

* *See* note * on preceding page.
† The evidence at inquests is often insufficient to enable the coroner to certify whether a violent death resulted from accident, murder, manslaughter, or suicide. All such cases are classed under "accident or negligence."
‡ *See* note ‡ on preceding page.

TABLE **15.—Deaths** REGISTERED in the **London Registration Districts**, and **Mean Temperature** a **Registered Sunshine** at **Greenwich**, in each of the 11 Years 1879–1889.

REGISTRATION DISTRICTS.	AREA in Acres.*	DENSITY, Persons to an Acre, 1881.	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	188
Mean Temperature	—	—	46°·2	49°·4	48°·7	49°·7	49°·4	50°·7	48°·6	48°·7	48°·0	47°·7	48°
Registered Sunshine in Hours	—	—	983	1214	1296	1245	1241	1115	1261	1228	1491	1068	1156
LONDON	77,410	49	83,964	81,957	81,431	83,015	81,108	82,383	80,946	82,682	82,449	79,246	75,68
1a PADDINGTON	1251	86	2068	1881	1871	1946	1974	1974	2040	2062	2023	2152	1915
1b KENSINGTON	2190	74	2910	2874	2818	3074	3030	3033	3193	3101	3126	3082	2703
2 FULHAM	4209	27	2219	2241	2472	2590	2618	2696	2761	2781	3201	3207	3171
3 CHELSEA	861	102	2108	2008	1946	2057	2096	2065	2208	2144	2188	1997	1977
4 ST. GEO. HANOVER SQ.	2051	73	3315	3163	3122	3086	3074	3010	2916	3103	2923	2855	2702
5 WESTMINSTER	216	216	979	986	931	880	775	841	772	788	734	634	689
6 MARYLEBONE	1506	103	3850	3498	3326	3115	2993	2807	2853	2880	2657	2606	2351
7 HAMPSTEAD	2248	20	626	580	619	636	690	841	770	774	771	778	833
8 PANCRAS	2672	88	5486	5638	5225	5077	4988	5181	5005	5058	5085	4782	4647
9 ISLINGTON	3107	91	5456	5716	5617	5643	5551	5515	5729	5510	5753	5206	5067
10 HACKNEY	3935	47	3440	3545	3990	3683	3756	3964	3793	3789	3847	3823	3597
11 ST. GILES	245	185	1095	1135	1019	1011	1009	1029	890	894	870	694	698
12 STRAND	433	78	1282	1086	997	1037	1026	1018	947	989	912	923	881
13 HOLBORN	816	186	3739	3209	3106	3187	2959	3039	2897	2964	3004	2937	2506
14 LONDON CITY	731	70	1591	1417	1469	1450	1448	1390	1422	1343	1361	1308	1176
15 SHOREDITCH	648	195	3074	2959	3001	3247	3023	2873	2950	3216	3071	2962	2626
16 BETHNAL GREEN	755	168	2949	2910	3064	3088	3082	2849	2897	3090	2815	2852	2591
17 WHITECHAPEL	405	176	2448	2245	2361	2344	2257	2200	2084	2261	2249	2181	2155
18 ST. GEO.-IN-THE-EAST	244	193	1409	1212	1333	1197	1248	1185	1287	1187	1161	1120	1015
19 STEPNEY	569	103	1402	1325	1279	1355	1396	1316	1497	1317	1313	1254	1254
20 MILE END OLD TOWN	679	156	2484	2346	2258	2386	2263	2193	2091	2142	2120	1987	1934
21 POPLAR	2648	59	3672	3797	3524	3979	3784	3719	3569	3617	3521	3521	3228
22 ST. SAVIOUR SOUTHWARK	1170	167	4728	4599	4270	4754	4366	4647	4229	4555	4469	3597	3766
23 ST. OLAVE SOUTHWARK	1728	78	3712	3364	3346	3514	3310	3382	3031	3397	3359	3168	3113
24 LAMBETH	4060	62	5669	5750	5406	5687	5402	5451	5212	5481	5430	5182	5131
25 WANDSWORTH	11707	18	3423	3637	3660	3845	4105	4203	4202	4424	4317	4330	3934
26 CAMBERWELL	4450	42	3454	3546	3491	3777	3428	3845	3765	3995	4140	4187	4150
27 GREENWICH	3801	35	2841	2956	3458	3023	2925	3193	3059	3005	3117	3017	3048
28 LEWISHAM	10794	6	985	1064	1051	1074	1054	1117	1129	1175	1176	1216	1115
29 WOOLWICH	7281	11	1550	1594	1401	1330	1538	1439	1534	1711	1645	1559	1695
METROPOLITAN ASYLUM HOSPITALS.†													
DARTFORD	—	—	—	—	—	—	—	253	449	19	2	4	—
WINCHMORE HILL	—	—	—	—	—	—	—	—	—	—	15	22	15
PLAISTOW	—	—	—	—	—	—	—	85	55	—	9	3	—

NOTE. — This Table is compiled from the Abstracts which appear in the Registrar General's Annual Reports, excepting for the year 1889, for which the numbers are derived from the Weekly Returns embracing 52 weeks.

* These areas include 2718 acres of tidal water, or of the river Thames. For area of Greater London see Table 7.

† Excluding deaths not belonging to Registration London.

LE 16.– LONDON. POPULATION; and BIRTHS and DEATHS in REGISTRATION DISTRICTS during the 52 Weeks of 1889.

REGISTRATION DISTRICTS.	Enumerated Population, 1881.	Total Births in 52 Weeks.	Total Deaths in 52 Weeks.	The DEATHS registered in the 52 Weeks include															
				Deaths of		Deaths from													
				Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus Fever.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.	Cholera.	Violence.	Inquest Cases.	Deaths in Public Institutions.	Uncertified Causes of Death.
LONDON	3815704	131487	75683	18580	18346	1	2314	784	1588	1749	15	538	43	2677	62	2928	5763	17660	801
EST DISTRICTS	669633	19616	13157	2927	3305	–	307	121	297	293	–	101	8	426	4	420	868	3738	85
ORTH DISTRICTS	905947	29569	16495	3864	4219	–	402	217	414	368	4	155	9	525	12	563	1228	3746	28
NTRAL DISTRICTS	282238	7671	5261	1186	1072	–	150	27	132	72	–	44	2	182	1	300	546	1597	41
AST DISTRICTS	692738	25827	14803	3796	3404	–	370	128	268	240	2	82	10	592	21	713	1567	4109	53
UTH DISTRICTS	1265148	48804	25952	6807	6146	1	1085	277	476	776	9	156	14	952	24	932	1554	4455	594
TROPOLITAN ASYLUM OSPITALS OUTSIDE REGISTRATION LONDON	–	–	15	–	–	–	–	14	1	–	–	–	–	–	–	–	–	15	–
WEST DISTRICTS.																			
PADDINGTON	107218	2864	1915	416	522	–	11	2	46	26	–	25	–	63	–	100	186	577	–
KENSINGTON	163151	3697	2703	486	930	–	14	8	67	26	–	19	1	70	2	53	150	841	5
FULHAM	114839	5953	3171	919	695	–	75	97	98	106	–	20	3	132	1	100	224	568	11
CHELSEA	88128	2931	1977	482	442	–	48	4	29	62	–	11	2	67	–	37	101	643	4
ST. GEO. HANOVER SQ.	149748	3215	2702	472	752	–	115	5	55	57	–	22	1	71	–	116	183	975	47
WESTMINSTER	46549	916	689	152	164	–	41	5	2	16	–	4	1	23	1	11	24	134	18
ORTH DISTRICTS.																			
MARYLEBONE	154910	4531	2351	599	558	–	44	1	25	67	1	17	–	59	1	80	120	436	7
HAMPSTEAD	45452	1498	833	182	273	–	13	35	43	21	–	7	–	18	1	26	52	187	6
PANCRAS	233258	7492	4647	1069	1187	–	89	14	58	117	–	36	2	168	2	218	431	1428	5
ISLINGTON	282865	9568	5967	1248	1324	–	179	35	50	111	–	48	7	180	5	131	328	864	3
HACKNEY	186462	6692	3597	766	917	–	75	132	233	52	3	47	–	100	3	108	227	831	7
NTRAL DISTRICTS.																			
ST. GILES	45382	1197	698	155	195	–	40	–	1	15	–	6	–	34	–	23	55	133	3
STRAND	83532	1788	881	167	193	–	13	2	30	13	–	12	–	29	–	55	102	454	6
HOLBORN	151835	5138	2506	736	437	–	82	21	46	39	–	10	1	102	1	91	210	382	16
LONDON CITY	51439	748	1176	128	247	–	15	4	55	5	–	16	1	17	–	131	179	625	16
EAST DISTRICTS.																			
SHOREDITCH	126591	4526	2626	716	749	–	28	20	56	92	1	13	1	119	4	108	211	751	14
BETHNAL GREEN	126961	4929	2591	697	584	–	132	25	53	62	–	13	3	94	2	81	208	561	2
WHITECHAPEL	71383	2629	2155	409	374	–	70	2	36	12	–	21	–	68	3	177	302	1167	5
ST. GEO.-IN-THE-EAST	47157	1841	1015	305	267	–	16	3	12	5	–	3	–	67	1	33	113	273	9
STEPNEY	58743	2092	1254	390	153	–	27	19	39	23	1	12	2	81	3	70	133	247	4
MILE END OLD TOWN	105613	3964	1934	536	480	–	59	42	27	31	–	8	–	78	6	57	159	290	18
POPLAR	156510	5836	3228	743	797	–	28	17	45	75	–	12	4	85	2	207	441	820	1
OUTH DISTRICTS.																			
ST. SAVIOUR SOUTHWARK	195164	7038	3766	1162	743	–	205	38	60	134	1	22	2	144	–	99	236	312	100
ST. OLAVE SOUTHWARK	134632	5089	2113	741	622	–	156	17	51	85	1	19	2	114	2	212	316	824	56
LAMBETH	253699	8966	5131	1289	1300	1	158	37	172	138	1	31	5	166	3	200	293	1093	137
WANDSWORTH	210434	9229	5934	1130	996	–	135	17	53	120	1	22	2	161	8	123	232	873	40
CAMBERWELL	186593	7271	4120	993	1097	–	194	18	53	150	–	26	1	134	1	82	154	842	80
GREENWICH	131233	5377	2048	778	675	–	131	133	61	103	5	24	1	150	1	111	182	603	90
LEWISHAM	72548	2508	1115	280	328	–	42	7	4	18	–	6	–	34	1	30	43	135	19
WOOLWICH	80845	3586	1695	454	415	–	61	5	22	28	–	6	1	49	8	75	96	208	72
TROPOLITAN ASYLUM OSPITALS OUTSIDE REGISTRATION LONDON	–	–	15	–	–	–	–	14	1	–	–	–	–	–	–	–	–	15	–

TABLE 17. LONDON.—POPULATION; and BIRTHS and DEATHS in REGISTRATION SUB-DISTRICTS during the 52 Weeks of 1889.

REGISTRATION SUB-DISTRICTS.	Enumerated Population, 1881.	Total Births in 52 Weeks.	Total Deaths in 52 Weeks.	The DEATHS registered in the 52 Weeks include														
				Deaths of		Deaths from											Inquest Cases.	Deaths in Public Institutions.
				Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus Fever.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.	Cholera.	Violence.		
WEST DISTRICTS.																		
St. Mary Paddington *WHH*	69888	2347	1265	343	374	-	11	2	31	21	-	9	-	58	-	45	98	243
St. John Paddington *H* -	37330	647	630	73	168	-	-	-	15	5	-	16	-	5	-	55	88	334
Kensington Town *Ww* -	120141	3008	2774	399	886	-	13	6	62	19	-	14	1	63	2	46	119	781
Brompton *H* - - -	43010	689	529	87	144	-	1	2	5	7	-	5	-	7	-	10	31	110
St. Peter Hammersmith -	7599	216	94	23	30	-	-	2	-	-	-	-	-	5	-	2	5	-
St. Paul Hammersmith *H*	64349	2615	1383	392	325	-	23	8	43	37	-	13	2	43	1	60	124	180
Fulham *Www* - -	42900	1382	1694	504	540	-	52	87	55	69	-	7	1	84	-	38	95	438
Chelsea South *HHH* - -	30396	890	640	195	117	-	21	3	20	19	-	6	2	29	-	26	52	146
Chelsea N.-wst *WHHHHH* -	24925	926	859	126	242	-	17	1	-	20	-	2	-	18	-	4	25	497
Chelsea North-east - -	32807	1135	478	161	83	-	10	-	9	23	-	3	-	20	-	7	24	-
Mayfair *WW* - - -	36353	359	592	54	296	-	8	-	1	13	-	2	-	5	-	21	30	348
Belgrave *WHHH* - -	59220	1314	1073	180	227	-	41	1	35	18	-	16	1	26	-	56	86	404
St. John Westminster *HHH*	35495	1112	558	166	120	-	43	1	4	19	-	1	-	27	-	16	32	10
St. Margaret Westmstr. *H* -	24679	433	479	72	109	-	18	3	15	7	-	3	-	13	-	23	35	218
St. James Westminster *WHH*	29941	534	452	92	129	-	32	3	2	10	-	3	1	13	-	3	16	91
St. Anne Soho *HHHHHH*	16603	382	237	60	35	-	12	2	-	6	-	1	-	10	1	8	8	43
NORTH DISTRICTS.																		
All Souls (Mylebo.) *HHHH*	26759	557	624	93	108	-	12	-	9	18	-	7	-	4	-	31	54	310
Cavendish Square *HHHH-*	14891	239	160	35	43	-	5	-	-	6	-	2	-	3	-	7	10	4
Rectory (Marylebone) *WH* -	24809	550	375	79	117	-	17	-	3	13	-	5	-	7	1	10	34	83
St. Mary (Marylebone) *HHH*	21118	1122	293	90	66	-	2	-	4	9	-	1	-	4	-	5	15	25
Christchurch (Marylebo.) *HHH*	33700	989	497	164	114	-	5	-	4	13	1	1	-	19	-	17	43	11
St. John (Marylebone) *H* -	33633	774	402	129	110	-	5	1	5	8	-	1	-	22	-	10	32	1
Hampstead *WwwHHHH* -	45452	1488	833	182	233	-	13	35	48	21	-	7	-	18	1	26	52	187
Regent's Park *H* - -	39115	1060	496	132	121	-	28	2	2	20	-	3	-	18	-	28	51	1
Tottenham Court *wHHHH*	27729	690	378	147	161	-	23	1	29	13	-	6	-	16	1	46	87	509
Gray's Inn Lane *HHH* -	30247	857	585	138	111	-	5	3	9	4	-	6	1	28	-	38	77	175
Somers Town *H*- - -	34369	1131	581	186	107	-	13	-	3	17	-	3	-	31	-	28	47	66
Camden Town *WH* - -	17311	671	639	99	323	-	3	1	1	5	-	4	1	21	-	43	76	439
Kentish Town *W* - - -	37487	2883	1468	367	364	-	17	7	14	58	-	9	-	54	1	35	93	248
Upper Holloway *WWwH* -	67946	2770	1975	362	585	-	79	15	19	38	-	21	1	51	3	52	100	828
Islington South-west *HH* -	100076	3355	1531	480	325	-	56	10	14	36	-	14	3	78	1	45	122	9
Islington South-east - -	61495	1889	885	229	233	-	21	7	4	19	-	10	2	25	-	21	60	-
Highbury *H* - - -	52048	1552	676	177	181	-	23	3	13	18	-	3	1	26	1	13	46	27
Stoke Newington *H* - -	23781	790	377	83	118	-	14	6	17	5	-	3	-	13	2	12	24	-
Stamford Hill - - -	9277	446	157	35	46	-	4	-	4	2	-	-	-	6	-	6	9	-
West Hackney *H* - -	37610	1197	545	138	134	-	23	7	16	7	-	4	-	15	-	19	41	38
Hackney *WwwH* - -	76911	2925	1944	345	497	-	23	117	175	19	3	37	-	47	-	58	113	793
South Hackney - - -	39883	1321	574	165	122	-	11	2	21	19	-	3	-	19	1	15	40	-
CENTRAL DISTRICTS.																		
St. George Bloomsbury -	16681	371	199	48	53	-	10	-	1	4	-	3	-	5	-	5	12	-
St. Giles South *WH* - -	14864	600	364	67	112	-	14	-	-	5	-	2	-	22	-	13	37	136
St. Giles North - - -	15837	226	135	40	30	-	16	-	-	6	-	1	-	7	-	5	6	-
St. Martin-in-the-Fields *HH*	17508	283	378	70	52	-	5	2	10	7	-	6	-	12	-	33	58	176
St. Mary-le-Strand *H* -	7515	128	106	30	31	-	-	-	-	1	-	-	-	6	-	5	13	6
St. Clement Danes *H* -	8559	169	309	66	42	-	8	-	20	5	-	6	-	11	-	16	28	184
Strand Un. Work., Edmonton w		8	88	1	68	-	-	-	-	-	-	-	-	-	-	1	3	88
St. Geo. the Martyr *HHHHHH*	18671	499	464	98	70	-	6	2	39	5	-	4	-	9	-	18	31	238
St. Andrew Eastern *W*	10706	286	185	45	35	-	7	4	-	1	-	-	-	4	-	10	23	47
Saffron Hill *H* - - -	6533	155	91	21	24	-	-	-	-	2	-	-	-	1	-	3	9	-
St. James Clerkenwell -	17516	578	278	100	42	-	14	-	1	7	-	2	-	19	-	11	31	-
Amwell - - - -	19281	577	261	73	45	-	10	2	-	4	-	-	-	14	-	7	21	-
Pentonville - - - -	14773	438	220	84	34	-	9	5	1	4	-	-	1	10	-	6	18	-
Goswell Street - - -	17506	584	274	82	56	-	14	3	4	8	-	1	-	11	1	5	19	-
Old Street *H* - - -	11541	420	171	59	22	-	7	4	-	5	-	1	-	14	-	4	13	3
City Road *HHL* - - -	18628	1057	354	123	54	-	7	1	1	3	-	2	-	11	-	20	35	61
Whitecross Street - -	9217	303	118	36	25	-	7	-	-	-	-	-	-	4	-	3	9	-
Finsbury - - - -	7463	139	59	15	11	-	1	-	-	-	-	-	-	5	-	3	6	-
Holborn Un. Work., Mitcham w		2	31	—	20	-	-	-	-	-	-	-	-	-	-	1	-	31
St. Botolph *H* - - -	11174	285	154	41	49	-	10	-	3	1	-	-	1	3	-	5	11	2
Cripplegate - - - -	7193	98	64	18	19	-	-	-	1	1	-	1	-	5	-	4	9	-
St. Sepulchre *H* - - -	5358	64	698	25	86	-	3	2	48	1	-	13	-	6	-	106	129	616
St. Bride *W* - - - -	8396	137	103	15	26	-	1	-	-	1	-	-	-	-	-	3	11	4
Allhallows Barking - -	13656	123	118	15	37	-	-	2	1	1	-	2	-	2	-	11	16	-
Broad Street *H* - - -	5652	59	44	4	20	-	1	-	2	-	-	-	-	1	-	2	3	6

Note.—The letters placed against the names of the sub-districts denote Public Institutions situated therein, namely:—*W*—Workhouse; *w*—Workhouse Establishment receiving inmates from other Districts than that in which it stands (see note at the foot of next page); *H*—Hospital; *L*—Lunatic Asylum; *L**—Private Lunatic Asylum in which paupers are received. For detailed list of the several Institutions, see Table 20.

TABLE 17 (*continued*).—LONDON.—POPULATION; and BIRTHS and DEATHS in REGISTRATION SUB-DISTRICTS, during the 52 Weeks of 1889.

REGISTRATION SUB-DISTRICTS.	Enumerated Population, 1881.	Total Births in 52 Weeks.	Total Deaths in 52 Weeks.	The DEATHS registered in the 52 Weeks include														
				Deaths of		Deaths from												
				Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus Fever.	Enteric (or Typhoid) Fever.	Simple continued Fever.	Diarrhœa.	Cholera.	Violence.	Inquest Cases.	Deaths in Public Institutions.	Uncertified Causes of Death.
EAST DISTRICTS.																		
ywell (Shoreditch)	7376	230	107	29	18	-	6	-	1	-	-	-	-	5	-	10	20	-	1
Leonard (Shoreditch) *HL**	14967	456	280	67	62	-	5	-	4	3	-	2	-	10	1	8	17	87	1
ton New Town *w*	29987	1116	749	171	323	-	13	13	7	9	-	1	-	26	-	17	46	294	5
ton Old Town	28046	976	430	154	81	-	1	5	5	9	1	2	1	25	-	15	37	-	3
gerston *WH*	46275	1743	1060	295	265	-	13	2	39	11	-	8	-	53	3	58	91	370	4
hual Green North *H*	51157	4939	2591	697	584	-	132	25	53	62	-	13	3	94	2	81	208	561	2
hual Green South	34399																		
hual Green East *WHL**	41405																		
alfields	22585	743	380	92	53	-	22	-	1	4	-	2	-	15	1	8	31	-	3
e End New Town *W*	15473	376	548	112	148	-	20	1	3	2	-	3	-	23	1	11	35	318	1
itechapel Church *H*	17499	595	1104	140	136	-	17	1	29	4	-	16	-	21	1	144	204	849	-
dman's Fields	9713	218	94	38	19	-	5	-	2	2	-	-	-	5	-	6	14	-	1
gate	6102	197	104	27	18	-	6	-	1	-	-	-	-	4	-	8	18	-	-
George's North (St. George ast)	38747	1537	612	249	84	-	16	1	12	1	-	3	-	55	-	23	82	-	8
John, St. Geo. East *W*	8410	304	403	56	183	-	-	2	-	4	-	-	-	12	1	10	31	273	1
dwell *H*	10395	441	433	100	21	-	2	1	23	3	-	6	-	43	1	37	84	247	-
cliff	16107	478	282	73	45	-	6	3	9	5	-	4	-	9	-	11	23	-	1
ehouse	32041	1173	589	157	87	-	19	15	7	15	1	2	2	24	2	22	56	-	3
e End Old Town Western *H*	37960	1505	589	175	125	-	22	5	15	7	-	2	-	35	1	12	52	-	11
e End Old Town Eastn. *WwwH*	37653	2459	1345	361	355	-	37	37	12	24	-	6	-	43	5	25	107	290	7
*L**	37074	1317	592	160	108	-	5	9	5	27	-	6	-	11	-	25	57	55	-
mley *wwwH*	64359	2587	1649	384	475	-	13	6	10	23	-	5	2	48	-	96	210	681	1
lar *WH*	55077	1932	957	249	214	-	10	2	30	25	-	1	2	26	2	86	174	84	-
SOUTH DISTRICTS.																			
istchurch Southwark *WH*	13663	464	243	70	72	-	4	1	4	1	-	-	-	12	-	5	15	31	12
Saviour Southwark	14999	426	227	66	59	-	7	2	2	6	-	1	-	14	-	11	19	-	11
t Road	21381	833	434	150	48	-	42	5	3	10	-	-	-	23	-	10	30	-	13
ough Road *WH*	15953	662	419	105	47	-	28	2	15	28	-	3	-	15	-	15	44	108	5
don Road *HL*	21318	717	383	89	48	-	12	4	1	7	-	2	-	10	-	18	43	16	7
ity Newington	26872	913	454	159	77	-	30	6	9	21	1	2	-	22	-	11	20	-	12
Peter Walworth *W*	59555	2138	1210	362	301	-	66	10	16	59	-	11	1	37	-	18	87	157	30
Mary Newington	21623	885	446	140	81	-	16	8	10	22	-	3	1	11	-	11	28	-	10
Olave Southwark *WH*	11956	477	3832	112	124	-	35	3	26	12	-	1	2	21	-	114	156	554	5
ther Market	16300	600	321	115	39	-	30	3	2	6	-	2	-	23	-	9	15	-	16
Mary Magdalen *W*	15669	635	338	89	100	-	32	4	3	5	1	2	-	18	-	11	27	54	14
James Bermondsey	54683	1935	821	241	146	-	53	4	9	39	-	7	-	22	1	36	51	-	16
nerhithe *WH*	36024	1442	801	184	213	-	26	3	11	23	-	7	-	30	1	42	67	216	5
erloo Road First *H*	15195	493	271	82	33	-	9	2	7	7	-	3	-	8	-	7	13	22	10
erloo Road Second *H*	10351	983	250	93	44	-	13	1	3	9	-	-	-	8	-	8	20	17	12
abeth Church First *H*	19876	622	908	184	113	-	35	13	74	13	-	7	1	26	2	119	138	362	17
abeth Church Second *WW*	39859	1575	1130	259	362	-	42	5	7	24	-	5	2	35	1	16	41	482	26
nington First	45232	1637	795	222	223	1	16	4	15	26	1	5	2	35	-	13	23	1	21
nington Second	35332	1030	546	128	165	-	12	4	18	17	-	2	-	9	-	10	21	-	18
kton *ww*	62837	1914	964	237	287	-	22	7	40	31	-	8	-	31	-	18	27	5	24
wood *W*	19017	652	267	84	75	-	9	1	8	11	-	1	-	14	-	9	10	9	9
t Battersea	54675	2411	883	308	149	-	48	9	11	21	-	4	-	36	2	36	61	-	10
t Battersea *WwH*	52587	2750	1357	403	324	-	56	3	10	60	-	9	2	71	3	37	79	269	10
ham *H*	36380	1111	529	126	180	-	11	2	19	15	-	4	-	12	1	13	25	9	6
dsworth *WHL*	28004	1415	494	128	122	-	7	-	6	6	1	3	-	20	1	16	35	95	2
ney	13235	376	183	44	51	-	2	1	-	6	-	1	-	11	-	9	16	-	2
atham	25553	1166	488	119	170	-	11	2	7	12	-	1	-	11	1	12	16	-	12
wich	5590	90	59	7	28	-	-	-	1	1	-	1	-	2	-	2	1	-	-
berwell *WwL*L**	59104	2296	1826	273	618	-	52	9	22	58	-	14	1	28	-	20	39	798	23
ham *W*	21089	2641	1261	355	295	-	86	3	13	43	-	6	-	62	1	28	53	44	39
George (Camberwell)	50810	2244	1004	358	161	-	56	6	17	48	-	5	-	42	-	32	61	-	18
Paul Deptford *ww*	76752	3325	1645	476	272	-	83	127	48	48	4	18	1	102	-	52	96	190	61
Nicholas Deptford	7901	264	148	54	18	-	3	-	-	9	-	-	-	7	-	8	10	-	9
nwich West *H*	21972	661	342	72	87	-	12	7	4	18	1	3	-	12	-	14	19	14	10
nwich East *WHH*	24608	1127	913	176	298	-	33	4	9	28	-	3	-	29	1	37	57	459	10
nm *H*	5048	110	49	14	15	-	-	-	-	1	-	-	-	3	-	4	4	5	-
H	21559	440	259	53	80	-	28	1	-	3	-	1	-	2	-	5	7	13	4
isham *WH*	19865	859	440	100	144	-	13	5	2	2	-	2	-	17	1	10	18	110	6
nham *H*	26076	899	367	113	89	-	1	1	2	12	-	3	-	12	-	11	14	7	9
lton *HH*	10930	348	204	40	57	-	4	2	3	4	-	-	-	9	-	5	6	26	5
lwich Dockyard	17617	634	291	75	54	-	11	2	3	6	-	2	1	5	4	16	19	-	20
lwich Arsenal *HH*	19048	752	349	105	61	-	6	-	3	4	-	2	-	12	-	25	34	9	7
nstead West *H*	14009	506	203	50	56	-	12	1	3	4	-	1	-	7	1	3	7	-	3
nstead East *W*	19241	1346	648	164	167	-	31	-	10	10	-	1	-	16	3	26	32	173	32
opolitan Asylum Hospital																			
p, Dartford w	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
hern Hospital, Edmonton w	-	-	15	-	-	-	-	14	1	-	-	-	-	-	-	-	-	15	-

TABLE 18.—OUTER RING.—AREA; POPULATION; and BIRTHS and DEATHS Registered during the 52 Weeks of 1889.

District and Sub-district Numbers.	REGISTRATION SUB-DISTRICTS.	Area in Acres, including Tidal Water and Foreshore.	Enumerated Population, 1881.	BIRTHS.	DEATHS.	The DEATHS registered in the 52 Weeks include												
						Deaths of		Deaths from									Inquest Cases.	Deaths in Public Institutions.
						Infants under 1 Year of Age.	Persons aged 60 Years & upwds.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Cholera.	Violence.		
	LONDON—OUTER RING	370,924	950,957	41,524	18,774	4871	4924	1	416	189	305	373	169	630	6	537	1048	2059
30 : 1	Carshalton *wL*	12228	21118	619	487	71	126	–	13	–	3	–	2	5	–	7	10	225
2	Epsom (*part of*)* *WwH*	9971	10710	300	162	33	55	–	–	1	1	24	–	9	–	2	6	55
37 : 1	Godstone (*part of*) *	2754	1235	44	21	5	7	–	–	–	2	–	–	–	–	1	3	3
38 : 1	Croydon *WwHHL*	20851	101241	3343	1766	379	531	–	36	13	17	44	18	48	–	44	96	316
2	Mitcham *w* †	11697	17932	626	231	64	69	–	3	–	6	20	1	4	–	9	17	5
39 : 1	Wimbledon *HHH*	3220	15950	696	273	76	72	–	1	1	8	13	1	8	–	7	11	11
2	Kingston *WHH*	8549	36354	1212	647	143	205	–	8	–	2	11	4	13	2	12	32	87
3	Esher (*part of*) * *H*	6601	9221	316	128	35	38	–	2	–	–	2	–	1	–	4	8	–
4	Hampton *H*	4573	13539	485	248	66	62	–	9	–	3	3	–	3	–	22	23	5
40 : 1	Richmond *WH*	2272	21302	613	356	69	131	–	5	6	–	6	5	6	–	16	24	56
2	Mortlake	2941	12331	456	242	66	61	–	3	–	1	5	3	14	–	8	16	–
4 : 1	Bromley (*part of*)* *HH*	15669	31142	1230	463	117	119	–	1	4	4	24	4	25	–	20	24	12
2	Chislehurst (*pt. of*)* *WHH*	14307	15844	540	305	64	107	–	1	–	8	4	–	15	–	4	10	66
42 : 1	Bexley *H*	13437	24134	873	403	83	138	–	12	6	5	10	7	12	1	24	33	5
2	Dartford (*Ww*†, *pts. of*)*	—	—	3	25	–	10	–	–	–	–	–	–	–	–	–	–	25
124 : 1	Sunbury *w*	11035	11685	317	142	39	47	–	–	1	3	–	1	8	–	1	6	1
2	Staines *WH*	13277	12089	437	214	52	87	–	–	–	2	4	2	6	–	4	13	33
125 : 1	Hillingdon *WHH*	6029	10802	369	237	50	82	–	1	1	23	5	2	4	–	7	16	57
2	Uxbridge	6176	5225	150	75	20	18	–	2	–	8	2	–	1	–	2	6	–
3	Hayes *wHL*	14587	11823	334	249	38	80	–	–	–	5	8	2	4	–	7	15	103
126 : 1	Isleworth *WHH*	7008	22727	808	476	107	170	–	–	2	4	4	5	26	–	19	46	112
2	Twickenham *HH*	2477	12479	390	218	56	58	–	8	3	2	3	1	6	–	4	11	11
3	Brentford *HL*	4345	27649	998	482	105	140	–	11	2	12	6	5	15	–	11	28	10
4	Chiswick	1340	15975	675	274	72	68	–	3	8	–	5	1	8	–	13	33	–
5	Acton *wH*	6033	22876	968	526	157	124	–	26	3	15	14	6	20	1	16	36	3
127 : 1	Harrow *H*	13809	12796	418	169	50	43	–	15	2	2	3	–	5	–	4	10	6
2	Edgware *H*	6994	3749	95	42	16	15	–	–	–	–	–	–	1	–	–	2	–
3	Willesden	4383	27453	1011	675	268	128	–	8	2	7	10	3	43	–	19	61	–
4	Hendon *W*	8382	10484	519	264	59	62	–	2	8	3	2	9	8	–	9	15	56
137 : 1	Bushey	9331	6621	214	85	16	36	–	3	–	–	–	–	–	–	1	3	–
2	Watford (*W, part of*)*	—	—	1	5	–	–	–	–	–	–	–	–	–	–	–	–	5
128 : 1	South Mimms	15599	6391	233	111	21	47	–	2	–	1	–	–	1	–	11	11	2
2	Barnet *WH*	5433	10092	290	165	26	56	–	–	1	1	3	–	3	–	10	18	28
3	Finchley *HL*	4688	17615	671	477	72	123	–	5	3	1	2	–	5	–	9	16	240
135 : 1	Hatfield (*part of*) *	3306	583	18	8	–	4	–	–	–	–	–	–	–	–	–	2	–
129 : 1	Hornsey *H*	3039	37078	1409	584	154	166	–	21	7	9	13	5	16	–	6	22	1
2	Tottenham *H*	4042	46456	3194	1205	400	254	–	7	3	50	19	15	52	–	46	90	70
3	Edmonton *Wwww* †	7482	23463	1103	495	104	147	–	20	2	5	2	3	11	–	16	26	104
4	Enfield *WH*	12653	19104	1010	383	110	103	–	9	5	5	9	1	20	–	14	20	31
5	Waltham Abbey	11017	5368	188	78	17	20	–	–	1	–	–	–	2	–	–	–	–
6	Cheshunt	8480	7735	292	89	22	31	–	–	–	–	–	2	4	–	2	3	–
186 : 1	Stratford	832	33606	1612	637	188	114	–	18	12	4	17	12	29	–	16	28	–
2	West Ham *wwwwH*	7351	101053	6255	2435	789	388	1	85	67	40	53	30	96	2	55	90	9
3	Leyton *WwL*	4572	32430	2016	951	221	306	–	11	6	11	12	7	21	–	13	25	260
4	Walthamstow *HH*	6520	28869	1856	690	214	144	–	40	14	19	3	6	27	–	12	38	1
187 : 1	Chigwell (*part of*) * *H*	11761	9669	353	173	36	48	–	21	2	5	–	3	9	–	13	17	5
2	Epping (*W part of*)	—	—	1	8	–	4	–	–	–	–	–	–	–	–	–	–	8
189 : 1	Romford (*part of*) * *W*	6730	3411	114	71	10	37	–	–	–	1	–	–	–	–	7	7	33
2	Ilford	8193	7615	339	195	46	35	–	3	2	4	2	–	3	–	3	5	–
3	Barking Town	4127	9203	330	189	77	47	–	1	1	3	6	3	13	–	7	6	–

* The parts of sub-districts included within that portion of the Metropolitan Police District which forms the Outer Ring are as follow 30 : 2, the whole of Epsom sub-district, except the parishes of Ashstead and Headley (pop. 1265); 37 : 1, the two parishes of Warlingham and Far in Godstone sub-district; 39 : 3, the whole of Esher sub-district, except the parish of Esher (pop. 1993); 41 : 1, the whole of Bromley sub distr except the two parishes of Cudham and Knockholt (pop. 1818); 41 : 2, the whole of Chislehurst sub-district, except the parish of Chelsfield (pop. 91 135 : 1, only the parish of Northaw in Hatfield sub-district; 187 : 1, the whole of Chigwell sub-district, except the parish of Theydon B (pop. 875); 189 : 1, only the parish of Dagenham in Romford sub-district. Deaths belonging to the Outer Ring occurring in workhouses in Dartfo (42 : 2), Watford (137 : 2), and Epping (187 : 2), are also included.

† Excluding deaths of London residents in Holborn Union workhouse, Mitcham, in Strand Union workhouse, Edmonton, and in Metropolit Asylum Hospitals, Dartford and Edmonton. (*See* Table 17.)

TABLE 19.—**Temperature** at **Greenwich**; **Population**; **Total Deaths**, and **Deaths** at **Seven groups of Ages**, in **London**, in each Week of 1889.

Number of Week.	Week ending	Temperature. Mean.	Highest Reading.	Lowest Reading.	Ages at Death. All Ages.	Under 1 Year.	1–5	5–20	20–40	40–60	60–80	80 and upwards.
	Population estimated to the middle of 1889				4,351,738	127,244	439,510	1,316,393	1,456,819	738,369	257,007	16,396
	Year (of 52 Weeks)	48·8	86·6	18·7	75,683	18,580	11,775	4,523	9,261	13,198	15,028	3,318
	March Quarter	38·2	60·0	18·7	21,133	4,473	3,573	1,202	2,385	3,738	4,719	1,048
	June "	54·5	85·2	32·6	17,344	3,951	2,937	1,090	2,249	3,097	3,298	722
	September "	58·9	86·6	35·7	17,881	5,801	2,411	1,092	2,079	2,863	3,002	633
	December "	43·5	61·9	22·7	19,320	4,355	2,854	1,139	2,548	3,500	4,009	915
	1889.											
1	January 5	31·8	40·0	24·2	1784	372	338	115	204	308	366	81
2	" 12	35·3	49·0	19·8	2075	373	370	107	218	383	506	118
3	" 19	37·8	51·3	32·1	1769	373	315	88	197	288	428	80
4	" 26	38·5	50·8	29·0	1620	325	281	103	162	280	394	75
5	February 2	43·1	56·0	30·9	1570	370	250	94	158	270	338	90
6	" 9	35·6	48·6	27·2	1460	324	233	93	181	243	313	73
7	" 16	34·3	49·2	18·9	1516	326	247	82	182	279	322	78
8	" 23	41·4	57·3	29·1	1567	344	238	84	202	278	337	84
9	March 2	32·8	39·6	27·6	1472	349	257	75	153	254	314	70
10	" 9	37·4	55·4	18·7	1637	322	277	96	175	309	391	67
11	" 16	38·8	52·4	25·1	1638	362	249	108	188	298	357	76
12	" 23	42·5	56·0	31·5	1554	317	276	73	165	274	366	83
13	" 30	45·6	60·0	26·6	1476	316	242	84	200	274	287	73
14	April 6	43·5	56·1	33·3	1572	368	261	100	175	287	305	76
15	" 13	43·5	55·1	35·5	1493	322	251	98	183	266	310	63
16	" 20	46·5	66·1	32·6	1426	299	279	92	174	214	299	69
17	" 27	47·5	64·5	35·1	1462	361	273	74	171	256	264	63
18	May 4	50·8	73·4	38·1	1386	309	246	71	184	266	258	52
19	" 11	57·7	74·2	47·7	1295	287	218	72	175	251	245	47
20	" 18	54·0	71·1	45·6	1231	267	225	79	169	205	232	54
21	" 25	61·9	85·2	45·3	1267	301	222	85	152	221	224	62
22	June 1	55·7	73·8	45·2	1151	242	181	83	148	209	237	51
23	" 8	64·3	83·9	49·8	1306	306	205	90	186	245	234	40
24	" 15	56·8	73·1	48·8	1247	283	184	87	173	227	236	47
25	" 22	59·6	79·0	48·1	1243	281	203	91	180	218	225	45
26	" 29	64·1	81·8	49·5	1265	315	189	68	179	232	229	53
27	July 6	63·3	81·2	50·3	1350	429	208	85	168	221	205	34
28	" 13	63·0	76·1	52·1	1605	617	196	89	151	232	257	63
29	" 20	58·7	74·2	47·5	1556	631	197	80	164	197	245	42
30	" 27	58·1	71·1	47·5	1553	599	216	83	166	228	212	49
31	August 3	64·9	86·6	50·4	1532	555	193	102	161	209	261	51
32	" 10	60·4	78·7	49·1	1366	468	195	76	139	222	216	50
33	" 17	59·3	77·7	48·8	1582	447	195	85	160	204	233	58
34	" 24	57·8	74·3	48·9	1240	387	163	78	140	197	223	52
35	" 31	60·2	84·2	44·1	1263	331	156	82	172	235	240	47
36	September 7	60·5	72·7	51·3	1170	306	141	88	151	219	216	49
37	" 14	63·0	81·8	46·1	1236	313	204	66	164	207	233	49
38	" 21	51·1	66·1	35·7	1267	332	182	85	157	248	216	47
39	" 28	50·6	65·1	36·1	1361	386	165	93	186	244	245	42
40	October 5	48·9	59·1	40·3	1381	376	172	82	201	230	261	59
41	" 12	49·8	61·4	40·0	1321	321	175	85	187	227	263	63
42	" 19	49·4	61·9	35·0	1410	320	187	83	209	274	272	65
43	" 26	46·7	56·7	34·9	1310	276	200	86	163	250	283	52
44	November 2	47·3	57·9	38·4	1317	323	212	64	200	209	253	56
45	" 9	47·3	57·2	32·6	1350	310	209	87	181	245	265	53
46	" 16	46·8	61·1	28·4	1451	343	235	89	188	254	265	77
47	" 23	44·9	55·3	35·0	1375	335	232	93	176	259	225	55
48	" 30	37·6	52·7	27·7	1448	333	227	87	184	266	292	59
49	December 7	32·1	37·8	22·7	1683	353	265	95	196	294	392	88
50	" 14	38·1	49·4	24·3	1768	375	247	97	227	312	418	92
51	" 21	43·5	53·1	33·2	1816	364	261	98	216	348	424	105
52	" 28	39·8	52·5	25·2	1690	326	232	93	220	332	396	91

TABLE 20.—Deaths in 180 Public Institutions

	DEATHS.		
	Total.	Males.	Females.
TOTAL DEATHS IN 180 PUBLIC INSTITUTIONS	17660	9918	7742
65 WORKHOUSES AND WORKHOUSE INFIRMARIES	9503	5168	4335
6 METROPOLITAN ASYLUM HOSPITALS	729	371	358
36 GENERAL HOSPITALS	6063	3562	2501
30 HOSPITALS FOR SPECIAL DISEASES	654	358	296
6 LYING-IN HOSPITALS — Women	9	—	9
6 LYING-IN HOSPITALS — Children	47	26	21
5 MILITARY AND NAVAL HOSPITALS	134	126	8
4 HOSPITALS FOR FOREIGNERS	147	109	38
8 LUNATIC ASYLUMS	374	198	176

PUBLIC INSTITUTIONS.	SUB-DISTRICTS in which situated.			
WORKHOUSES AND WORKHOUSE INFIRMARIES.				
Paddington Workhouse	1*a*; 1. St. Mary Paddington	49	24	25
Paddington Infirmary	1*a*; 1. St. Mary Paddington	121	70	51
Kensington Workhouse	1*b*; 1. Kensington Town	4	3	1
Kensington Infirmary	1*b*; 1. Kensington Town	324	172	152
Marylebone Infirmary	1*b*; 1. *Kensington Town*	403	215	188
Fulham Workhouse	2; 3. Fulham	17	9	8
Fulham Infirmary	2; 3. Fulham	288	140	148
Chelsea Workhouse	3; 2. Chelsea North-west	29	9	20
Chelsea Infirmary	3; 2. Chelsea North-west	212	127	85
St. George's Workhouse (Fulham Road)	4; 1. Mayfair	10	8	2
St. George's Infirmary (Fulham Road)	4; 1. Mayfair	337	196	141
St. George's Workhouse (Wallis's Yard)	4; 2. Belgrave	5	4	1
Westminster	5; 1. St. James Westmr.	76	34	42
Marylebone	6; 3. Rectory Marylebone	78	33	45
Hampstead	7; 1. Hampstead	55	27	28
Central London Sick Asylum	8; 2. *Tottenham Court*	195	125	70
Pancras	8; 5. Camden Town	392	178	214
Pancras Infirm. (Highgate)	8; 6. Kentish Town	248	127	121
Islington Workhouse (St. John's Road)	9; 1. Upper Holloway	12	9	3
Islington Infirmary (St. John's Road)	9; 1. Upper Holloway	483	265	218
Islington Workhouse (Cornwallis Road)	9; 1. Upper Holloway	9	8	1
Islington Work. Sch.	9; 1. Upper Holloway	3	1	2
Holborn Infirmary	9; 1. *Upper Holloway*	246	160	86
Hackney Workhouse	10; 4. Hackney	10	5	5
Hackney Infirmary	13; 4. Hackney	335	163	172
City of London	10; 4. *Hackney*	9	2	7
St. Giles	11; 2. St. Giles South	135	78	57
Strand	129; 3. *Edmonton*	88	43	45
Holborn	13; 2. St. Andrew Eastern	47	26	21
Holborn	38; 2. *Mitcham*	31	25	6
City of London	14; 4. St. Bride	4	—	4
Holborn Infirmary	15; 3. *Hoxton New Town*	294	137	157
Shoreditch Workhouse	15; 5. Haggerston	2	1	1
Shoreditch Infirmary	15; 5. Haggerston	284	165	119
Bethnal Green	16; 2. Green	397	225	172
Whitechapel Infirmary	17; 2. Mile End New Town	318	180	138

PUBLIC INSTITUTIONS.	SUB-DISTRICT in which situated.	DEATHS.		
		Total.	Males.	Females.
WORKHOUSES AND WORKHOUSE INFIRMARIES—*continued.*				
St. George-in-the-East Workhouse	18; 2. St. John	8	6	2
St. George-in-the-East Infirmary	18; 2. St. John	265	142	123
Mile End Workhouse	20; 2. Mile End O. T. East	4	2	2
Mile End Infirmary	20; 2. Mile End O. T. East	221	103	118
Mile End Workh. Sch.	20; 2. Mile End O. T. East	5	3	2
City of London Infirmary — part of	20; 2. *Mile End O. T. East.*	57	7	50
City of London Infirmary — part of	21; 2. *Bromley*	144	99	45
Poplar and Stepney Sick Asylum	21; 2. *Bromley*	481	281	200
Stepney (Aged and Infirm)	21; 2. *Bromley*	29	19	10
Poplar	21; 3. Poplar	72	44	28
St. Saviour's	22; 1. Christch. Southwrk.	31	31	—
St. Saviour's	22; 4. Borough Road	12	10	2
St. Saviour's	22; 7. St. Peter Walworth	157	63	94
St. Olave's	23; 1. St. Olave Southwk.	44	26	18
St. Olave's	23; 3. St. Mary Magdalen	53	29	24
St. Olave's Infirmary	23; 5. Rotherhithe	216	123	93
Lambeth Workhouse (Renfrew Road)	24; 4. Lambeth Church 2nd	38	12	26
Lambeth Infirmary (Brook Street)	24; 4. Lambeth Church 2nd	444	244	200
Lambeth (Work. School)	24; 8. Norwood	9	5	4
Wandsworth Infirmary	25; 2. West Battersea	263	132	131
Wandsworth Workhouse	25; 4. Wandsworth	5	3	2
Camberwell Workhouse	26; 2. Camberwell	94	48	46
Camberwell Infirmary	26; 2. Camberwell	200	115	85
St. Saviour's Infirmary	26; 2. *Camberwell*	416	252	164
Camberwell (Gordon Rd.)	26; 3. Peckham	44	21	23
Greenwich Workhouse	27; 4. Greenwich East	104	37	67
Greenwich Infirmary	27; 4. Greenwich East	253	145	108
Lewisham	28; 3. Lewisham	110	63	47
Woolwich Workhouse	29; 5. Plumstead East	1	1	—
Woolwich Infirmary	29; 5. Plumstead East	172	88	84
METROPOLITAN ASYLUM HOSPITALS.				
Western	2; 3. *Fulham*	133	67	66
North-Western	7; 1. *Hampstead*	84	41	43
Eastern	10; 4. *Hackney*	302	149	153
South-Western	24; 7. *Brixton*	5	3	2
South-Eastern	27; 1. *St. Paul Deptford*	190	104	86
Northern	129; 3. *Edmonton*	15	7	8
GENERAL HOSPITALS.				
For Children	1*a*; 1. St. Mary Paddington	71	31	40
St. Mary's	1*a*; 2. St. John Paddington	334	212	122
Queen's Jubilee Hospital	1*b*; 2. Brompton	1	—	1
West London	2; 2. St. Paul Hammersm.	130	84	46
Victoria (*Children*)	3; 1. Chelsea South	141	68	73
Cheyne (*Children*)	3; 1. Chelsea South	5	3	2
St. Raphael's	3; 2. Chelsea North-west	3	3	—
St. George's	4; 2. Belgrave	371	243	128
Belgrave (*Children*)	4; 2. Belgrave	5	3	2
St. Gabriel's (*Children*)	4; 2. Belgrave	21	12	9
Grosvenor (Vincent Sq.)	4; 3. St. John Westm.	1	1	—
Westminster	4; 4. St. Margaret Westm.	213	125	88
Home (Dean Street)	5; 2. St. Anne Soho	5	3	2
Middlesex	6; 1. All Souls Marylebone	307	156	151
Ladies'	6; 2. Cavendish Square	3	—	3

NOTE.—Institutions in which no deaths occurred during the year are not shown in the Table. The Workhouse Establishments printed in *italics* receive inmates from other Districts than those in which they are situated.

registered during the 52 Weeks of 1889.

PUBLIC INSTITUTIONS.	SUB-DISTRICT in which situated.	DEATHS. Total.	Males.	Females.
GENERAL HOSPITALS—*continued.*				
Samaritan Free	6; 3. Rectory Marylebone	7	–	7
	6; 5. Christchurch	3	–	3
For Incurables	6; 5. Christchurch	1	–	1
St. Peter's Home(Kilburn)	7; 1. Hampstead	16	1	15
Home	7; 1. Hampstead	3	–	3
University College	8; 2. Tottenham Court	300	169	131
Home	8; 2. Tottenham Court	11	9	2
Medical & Surgical Home	8; 2. Tottenham Court	3	2	1
Royal Free	8; 3. Gray's Inn Lane	165	99	66
Temperance	8; 4. Somers Town	56	25	31
North-west London	8; 5. Camden Town	47	30	17
Great Northern Central	9; 1. Upper Holloway	75	43	32
Mildmay Memorial	9; 4. Highbury	19	10	9
Incurables	9; 4. Highbury	8	3	5
Metropolitan Free	10; 3. West Hackney	38	18	20
Charing Cross	12; 1. St. Martin-in-the-Fields	175	120	55
King's College	12; 3. St. Clement Danes	184	99	85
London Homœopathic	13; 1. St. George the Martyr	39	24	15
St. John and St. Elizabeth's	13; 1. St. George the Martyr	26	–	26
For Children	13; 1. St. George the Martyr	126	67	59
City Police	14; 1. St. Botolph	2	2	–
St. Bartholomew's	14; 3. St. Sepulchre	616	402	214
Convent	15; 2. St. Leonard	11	8	3
North-Eastern (*Children*)	15; 5. Haggerston	84	50	34
Mildmay Medical Mission	16; 1. Hackney Road	21	10	11
London	17; 3. Whitechapel Church	849	540	309
East London (*Children*)	19; 1. Shadwell	246	136	110
Poplar	21; 2. Bromley	47	37	10
St. John's	21; 3. Poplar	12	6	6
Evelina (*Children*)	22; 4. Borough Road	96	41	55
Guy's	23; 1. St. Olave	510	301	209
Royal Infirmary (*Women and Children*)	24; 1. Waterloo 1st	22	11	11
St. Thomas's	24; 3. Lambeth Church 1st	562	311	251
Bolingbroke House	25; 2. West Battersea	6	4	2
British Home for Incurables	25; 3. Clapham	9	4	5
Royal Hospital for Incurables	25; 4. Wandsworth	7	5	2
Miller Memorial	27; 3. Greenwich West	14	8	6
Cottage Hospital	27; 4. Greenwich East	3	2	1
Cottage	28; 1. Eltham	5	4	1
St. John's	28; 2. Lee	13	8	5
Home for Sick Children	28; 4. Sydenham	7	4	3
Cottage Hospital	29; 1. Charlton	8	5	3
HOSPITALS FOR SPECIAL DISEASES.				
Lock	1a; 1. St. Mary Paddington	2	–	2
Consumption & Disease of Chest	1b; 2. Brompton	109	60	49
	3; 2. Chelsea North-west	131	94	37
Cancer	3; 2. Chelsea North-west	110	29	81
For Women	3; 2. Chelsea North-west	12	–	12
Royal Orthopœdic	4; 1. Mayfair	1	1	–
Gordon (*Cancer*)	4; 2. Belgrave	2	2	–
Diseases of Women and Children	4; 3. St. John Westminst.	1	–	1
Diseases of Throat	5; 1. S. James Westm.	15	12	3
For Women	5; 2. St. Anne Soho	14	–	14
Heart diseases	5; 2. St. Anne Soho	4	3	1
Skin Hospital	5; 2. St. Anne Soho	1	1	–

PUBLIC INSTITUTIONS.	SUB-DISTRICT in which situated.	DEATHS. Total.	Males.	Females.
HOSPITALS FOR SPECIAL DISEASES—*continued.*				
St. Agnes (*Consumption*)	6; 1. All Souls Maryleb.	1	–	1
London Throat	6; 1. All Souls	1	1	–
Orthopœdic	6; 1. All Souls	1	–	1
West End, for Paralysis	6; 2. Cavendish Square	1	1	–
Home for Consumptive Females	6; 4. St. Mary Maryleb.	4	–	4
New (*Women*)	6; 5. Christch. Maryleb.	7	1	6
Epilepsy, &c.	6; 6. St. John (Maryleb.)	1	–	1
North London (*Consumption*)	7; 1. Hampstead	29	24	5
St. Saviour's (*Cancer*)	8; 1. Regent's Park	1	–	1
Central London Throat and Ear	8; 3. Gray's Inn Lane	10	9	1
London Fever	9; 2. Islington South-west	9	5	4
Royal Western Ophthalmic	12; 1. St. Martin-in-the-Fields	1	–	1
St. Peter's (*Stone, &c.*)	12; 2. St. Mary-le-Strand	6	6	–
National for Paralysed and Epileptic	13; 1. St. George the Martyr	34	16	18
Alexandra (*Hip Diseases*)	13; 1. St. George the Martyr	5	2	3
St. Mark's (*Fistula*)	13; 8. Old Street	5	4	1
Royal for Dis. of Chest	13; 9. City Road	38	20	18
Royal London Ophthalmic	14; 6. Broad Street	3	2	1
City of London for Diseases of the Chest	16; 2. Green	95	65	30
LYING-IN HOSPITALS.				
Queen Charlotte's	6; 4. St. Mary (Marylebone) Women	1	–	1
	6; 4. St. Mary (Marylebone) Children	20	14	6
British	11; 2. St. Giles South Women	1	–	1
	11; 2. St. Giles South Children	–	–	–
City of London	13; 9. City Road Women	2	–	2
	13; 9. City Road Children	13	8	5
Mothers' Lying-in Home	19; 1. Shadwell Women	1	–	1
	19; 1. Shadwell Children	–	–	–
General (York Road)	24; 2. Waterloo 2nd Women	4	–	4
	24; 2. Waterloo 2nd Children	13	4	9
Clapham Maternity	24; 3. Kenning-ton 1st Women	–	–	–
	24; 3. Kenning-ton 1st Children	1	–	1
MILITARY AND NAVAL HOSPITALS.				
Station Hospitals	4; 3. St. John Westminster	8	8	–
Seamen's	27; 4. Greenwich East	99	96	3
Herbert	29; 1. Charlton	18	18	–
Garrison Female	29; 3. Woolwich Arsenal	6	2	4
Arsenal Infirmary	29; 3. Woolwich Arsenal	3	2	1
HOSPITALS FOR FOREIGNERS.				
French	5; 2. St. Anne Soho	19	16	3
German	10; 4. Hackney	117	88	29
Italian	13; 1. St. George the Martyr	8	4	4
Spanish and Portuguese Jews'	29; 2. Mile End Old Town Eastern	3	1	2
LUNATIC ASYLUMS.*				
St. Luke's Hospital	13; 9. City Road	8	4	4
Hoxton House *	15; 2. St. Leonard	76	23	53
Bethnal House *	16; 2. Green	48	28	20
Grove Hall	21; 1. Bow	55	51	4
Bethlehem Hospital	22; 5. London Road	16	9	7
Surrey County	25; 4. Wandsworth	83	38	45
Peckham House *	26; 2. Camberwell	50	25	25
Camberwell House *	26; 2. Camberwell	38	20	18

* LUNATIC ASYLUMS.—Private Lunatic Asylums are excluded from this list, except those in which *pauper* lunatics are received, which are marked thus *.

TABLE 21. LONDON.—**Weekly Deaths** from the principal ZYMOTIC DISEASES during the Fou
Fifty Yea

	SMALL-POX.				MEASLES.				SCARLET FEVER.				DIPHTHERIA.			
	1886	1887	1888	1889	1886	1887	1888	1889	1886	1887	1888	1889	1886	1887	1888	188
YEAR	24	9	9	1	2078	2894	2401	2314	688	1447	1209	784	846	961	1301	1588
March Quar.	9	2	4	-	507	859	238	1106	102	171	415	182	220	196	314	355
June „	12	3	1	-	537	1227	247	667	102	192	235	149	188	193	254	318
Sept. „	2	1	2	-	390	480	428	218	174	420	238	191	185	244	273	467
Dec. „	1	3	2	1	644	328	1488	323	310	664	321	262	253	328	460	448
Week.																
1	-	-	-	-	49	104	25	143	6	11	37	12	21	9	28	33
2	3	-	1	-	51	97	25	176	13	17	25	17	22	18	16	21
3	2	-	-	-	49	65	14	121	9	16	42	19	20	13	22	38
4	-	-	-	-	38	54	16	83	11	14	29	20	13	22	29	33
5	-	-	-	-	41	48	18	71	5	11	39	11	14	16	29	38
6	-	1	-	-	30	24	15	56	7	15	36	12	18	17	40	24
7	-	-	1	-	25	35	14	43	7	13	30	16	19	15	18	24
8	-	-	-	-	40	52	18	70	14	17	32	14	20	14	30	27
9	3	-	-	-	40	55	15	67	5	9	27	12	19	19	24	23
10	-	-	2	-	37	79	21	76	6	13	29	16	14	13	24	20
11	-	-	-	-	40	84	22	60	8	15	25	16	14	13	22	31
12	1	1	-	-	40	77	18	84	6	14	24	16	18	13	17	23
13	-	-	-	-	27	85	17	56	5	6	40	11	8	14	15	18
14	1	-	-	-	52	62	16	74	10	7	20	15	15	15	16	26
15	1	1	-	-	38	81	12	72	7	11	17	13	17	21	19	36
16	5	1	-	-	50	95	18	70	8	17	21	10	16	14	10	23
17	-	-	1	-	45	102	16	65	7	12	15	9	20	16	22	29
18	-	-	-	-	39	90	14	68	6	19	23	15	9	20	15	21
19	2	-	-	-	48	89	22	60	7	16	19	10	19	9	15	22
20	2	1	-	-	45	98	18	53	6	11	13	7	9	12	29	24
21	-	-	-	-	28	112	23	47	7	22	17	16	20	14	19	21
22	-	-	-	-	41	109	24	31	11	15	19	4	13	15	26	16
23	-	-	-	-	39	114	25	39	11	27	23	12	11	9	22	34
24	1	-	-	-	27	113	21	32	9	8	19	11	16	16	18	29
25	-	-	-	-	43	98	18	23	7	14	10	17	14	19	15	27
26	-	-	-	-	42	64	20	33	6	13	19	10	9	13	28	13
27	-	-	-	-	57	77	23	31	14	25	10	9	14	11	29	38
28	1	1	1	-	48	65	26	30	10	23	18	9	14	16	24	26
29	-	-	1	-	46	48	25	29	15	22	14	12	11	24	15	23
30	-	-	-	-	46	62	40	20	10	20	23	6	15	20	21	44
31	-	-	-	-	35	34	29	25	14	25	18	11	9	7	19	43
32	-	-	-	-	29	34	51	15	10	21	17	16	15	21	25	28
33	-	-	-	-	26	32	33	18	9	23	17	13	17	22	13	36
34	-	-	-	-	31	29	47	9	17	36	21	16	22	24	17	37
35	-	-	-	-	20	30	39	12	13	39	15	17	11	20	23	32
36	1	-	-	-	18	15	26	9	11	53	19	18	9	18	18	30
37	-	-	-	-	11	22	27	10	16	57	24	17	13	20	18	41
38	-	-	-	-	12	11	32	3	19	38	20	25	15	21	24	44
39	-	-	-	-	11	21	30	7	16	38	22	22	20	20	27	44
40	-	-	-	-	22	10	39	9	23	48	24	20	28	25	35	43
41	-	-	-	-	27	14	50	13	24	56	30	15	18	22	26	36
42	-	-	-	-	21	18	80	23	24	58	33	25	25	21	36	41
43	-	1	1	-	24	33	100	17	29	60	25	27	23	31	31	37
44	-	-	1	-	27	30	88	22	25	69	24	20	18	19	32	31
45	-	1	-	1	29	38	109	20	29	62	18	28	28	30	34	23
46	-	-	-	-	33	25	124	33	33	41	31	24	26	25	44	38
47	-	1	-	-	60	27	133	33	22	54	20	17	24	31	41	30
48	-	-	-	-	60	26	141	18	19	54	24	19	12	28	34	33
49	-	-	-	-	87	32	139	41	16	42	30	24	14	27	35	47
50	1	-	-	-	57	17	154	30	17	41	17	12	16	23	39	35
51	-	-	-	-	83	30	184	35	24	39	25	22	17	24	39	27
52	-	-	-	-	114	28	147	29	25	40	20	14	9	22	34	23
53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Years 1886–1889; and the AVERAGE WEEKLY Numbers from these DISEASES during the 1840–1889.

WHOOPING-COUGH.				FEVER.				DIARRHŒA.				WEEKLY AVERAGE in 50 Years, 1840-89.							
1886	1887	1888	1889	1886	1887	1888	1889	1886	1887	1888	1889	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	
2834	2928	2087	1749	701	672	720	596	3950	3773	2176	2677	18	33	* 45	* 12	46	35	50	YEAR.
1551	443	1617	452	145	144	243	114	201	176	151	189	21	31	37	11	64	35	18	March Qr.
786	834	799	541	121	86	150	103	244	209	240	269	22	37	31	11	55	32	19	June „
295	823	348	360	197	178	134	160	3182	2200	1439	1965	13	27	46	12	32	34	144	Sept. „
202	828	223	456	238	264	193	219	373	188	346	251	15	37	65	14	35	40	24	Dec. „
																			Week.
118	17	120	32	16	17	31	15	17	10	12	11	21	43	47	13	55	37	13	- - 1
103	32	152	37	15	11	23	11	10	13	11	12	21	40	47	11	56	37	13	- - 2
94	31	138	36	11	14	27	7	13	13	15	11	23	35	46	11	61	36	13	- - 3
118	31	168	24	8	11	14	11	12	22	11	24	22	30	41	12	66	36	13	- - 4
121	40	177	38	12	15	29	11	17	12	15	13	23	27	37	13	68	36	14	- - 5
130	37	153	33	14	9	13	5	23	15	12	18	23	24	37	13	68	34	14	- - 6
110	41	122	31	11	6	18	13	14	14	8	10	22	23	34	11	64	35	13	- - 7
119	35	127	31	9	10	16	9	15	17	8	16	21	27	35	11	65	34	14	- - 8
125	29	94	31	9	5	15	7	23	11	10	18	21	26	33	11	63	32	14	- - 9
126	35	101	29	8	14	20	7	13	12	17	15	20	28	32	10	63	35	13	- - 10
120	42	92	37	11	10	12	6	23	16	10	14	19	30	28	11	64	35	12	- - 11
117	42	80	42	13	12	11	4	10	9	6	18	19	31	28	10	66	33	13	- - 12
120	31	93	51	8	10	14	8	11	12	16	9	19	33	30	11	69	35	12	- - 13
81	35	89	49	8	8	21	9	15	9	17	17	21	34	28	10	66	32	12	- - 14
94	53	108	43	10	8	9	12	15	4	19	11	21	34	28	12	67	34	12	- - 15
92	46	91	51	8	6	14	6	15	12	23	10	23	34	30	11	64	34	13	- - 16
100	59	80	56	11	4	7	4	9	19	17	18	22	36	28	12	61	32	13	- - 17
87	73	87	55	12	5	12	7	14	12	19	12	23	36	31	10	59	32	13	- - 18
76	59	52	37	7	4	10	9	15	8	14	10	21	37	30	10	58	30	12	- - 19
49	66	64	36	10	4	12	8	8	12	15	14	24	37	29	10	56	32	13	- - 20
41	73	64	48	8	5	13	6	12	10	9	13	23	37	32	10	55	32	14	- - 21
42	75	37	49	13	6	9	9	15	12	19	14	21	40	33	11	51	31	16	- - 22
36	74	33	26	8	9	9	7	14	9	18	19	22	39	34	11	47	31	18	- - 23
28	66	34	37	9	10	9	10	28	20	16	34	21	39	31	11	43	31	24	- - 24
26	79	33	27	9	7	15	7	41	30	18	39	21	38	34	11	43	30	34	- - 25
34	76	27	27	8	10	10	9	43	52	36	57	20	37	34	11	42	30	48	- - 26
33	86	31	32	10	15	9	8	156	133	51	155	17	33	36	11	40	31	81	- - 27
30	87	32	26	12	8	13	10	315	312	72	255	16	34	38	11	39	32	131	- - 28
32	100	33	29	6	9	8	7	370	483	62	273	15	35	39	11	39	32	179	- - 29
31	92	30	19	17	9	16	9	411	517	89	271	15	33	41	11	37	33	218	- - 30
28	81	25	22	14	11	9	8	373	456	121	199	13	32	41	10	34	31	209	- - 31
12	61	27	19	20	19	7	9	270	412	188	175	13	28	44	11	33	33	195	- - 32
20	50	20	17	12	14	5	8	248	316	162	158	13	28	43	11	29	34	180	- - 33
22	51	28	20	11	13	7	11	191	191	192	109	13	25	47	12	29	34	161	- - 34
18	42	24	21	20	10	11	12	176	132	144	78	12	24	47	12	28	36	142	- - 35
26	50	32	23	15	20	12	23	191	107	131	68	12	20	49	11	28	36	124	- - 36
18	53	31	18	17	17	13	21	172	73	122	66	11	19	54	13	27	38	102	- - 37
19	36	22	26	17	16	11	12	146	45	78	73	11	20	55	14	26	39	83	- - 38
6	34	13	23	26	17	13	22	113	43	77	80	10	19	64	13	25	39	70	- - 39
11	38	5	14	19	15	9	21	67	18	72	52	12	22	67	15	26	39	53	- - 40
10	27	18	14	22	17	14	17	59	24	45	28	12	23	68	14	25	39	44	- - 41
8	36	12	26	21	18	20	14	51	11	42	22	11	27	70	15	26	41	35	- - 42
9	44	18	22	31	17	19	23	30	16	30	15	12	28	72	13	27	42	28	- - 43
19	44	19	21	20	26	22	19	31	20	34	17	12	31	72	13	30	42	24	- - 44
12	33	15	24	22	18	14	11	31	12	18	17	14	35	68	14	29	40	20	- - 45
18	54	17	37	19	25	15	21	23	11	16	16	15	38	69	15	34	41	19	- - 46
11	75	19	31	15	18	17	24	13	18	18	17	14	41	67	16	35	41	16	- - 47
20	67	20	44	7	24	12	16	16	14	13	12	16	45	65	14	38	41	15	- - 48
19	70	13	47	19	31	13	10	12	12	19	12	17	45	60	15	43	41	15	- - 49
19	106	14	49	13	20	18	15	12	12	11	14	19	46	60	14	46	41	14	- - 50
19	104	25	60	12	16	12	13	13	8	16	13	18	48	52	15	49	38	13	- - 51
27	130	28	67	18	19	8	15	15	12	14	19	20	46	50	14	54	36	13	- - 52
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	- - 53

* The weekly averages for scarlet fever and diphtheria relate to the 30 years 1860–89.

TABLE 22.—**Births** and **Deaths** Registered in **London**, and **Meteorology** at **Greenwich**, in each Week of 1889.

No. of Week.	Week ending	Births. Total.	Males.	Females.	Deaths. Total.	Males.	Females	Mean Temperature of the Air.	Mean of the Highest Readings of the Thermometer.	Mean of the Lowest Readings of the Thermometer.	Degree of Humidity (complete saturation = 100).	Fall of Rain in Inches.	Mean Hourly Amount of Horizontal Movement of the Air in each Week.	Sun above Horizon in Hours.	Registered Sunshine in Hours.
	1889.							°	°	°			Miles.		
1	Jan. 5	2855	1481	1374	1784	905	879	31·8	36·1	27·1	93	0·00	5·4	55·1	3·2
2	„ 12	2668	1326	1342	2075	1023	1052	35·3	39·7	30·9	93	0·49	8·7	56·5	2·7
3	„ 19	2837	1430	1407	1769	899	870	37·8	41·0	34·0	87	0·02	7·4	58·1	1·5
4	„ 26	2599	1285	1314	1620	848	772	38·5	43·3	33·6	93	0·15	8·5	60·4	5·3
5	Feb. 2	2662	1327	1335	1570	796	774	43·1	49·4	36·5	88	0·22	18·4	62·9	13·0
6	„ 9	2772	1433	1339	1460	721	739	35·6	41·9	30·2	81	0·80	20·2	65·7	7·4
7	„ 16	2511	1334	1177	1516	744	772	34·3	40·9	27·1	84	1·19	13·6	68·7	8·7
8	„ 23	2695	1341	1354	1567	762	805	41·4	47·3	36·2	81	0·05	15·2	71·9	14·9
9	March 2	2609	1321	1288	1472	737	735	32·8	37·7	29·8	83	0·13	10·2	75·0	7·6
10	„ 9	2698	1361	1337	1637	827	810	37·4	46·3	28·9	75	0·54	12·3	78·3	26·0
11	„ 16	2699	1366	1333	1638	812	826	38·3	46·8	31·2	80	0·04	10·8	81·4	14·8
12	„ 23	2670	1404	1266	1554	762	792	42·5	50·3	35·7	80	0·46	13·4	84·7	18·4
13	„ 30	2808	1403	1405	1476	731	745	45·6	54·6	38·6	81	0·11	14·9	88·0	14·3
14	April 6	2676	1408	1268	1572	807	765	43·5	51·8	37·4	78	0·27	11·1	91·2	21·3
15	„ 13	2509	1292	1217	1493	777	716	43·5	50·4	38·6	90	0·56	8·9	94·5	8·6
16	„ 20	2488	1301	1187	1426	708	718	46·5	55·3	39·8	84	0·10	11·3	97·5	12·5
17	„ 27	2522	1279	1243	1462	777	685	47·5	57·8	39·1	80	0·75	} ? {	100·5	31·3
18	May 4	2712	1393	1319	1386	729	657	50·8	61·9	41·5	79	0·79		103·4	39·8
19	„ 11	2565	1264	1301	1295	619	676	57·7	67·9	49·1	77	0·71		106·2	37·5
20	„ 18	2648	1358	1290	1231	631	600	54·0	64·5	46·7	85	0·19	7·5	108·7	27·7
21	„ 25	2402	1218	1184	1267	664	603	61·9	75·1	50·8	77	0·51	5·8	111·1	49·1
22	June 1	2405	1214	1191	1151	607	544	55·7	64·9	48·0	82	1·33	11·1	112·9	47·2
23	„ 8	2523	1299	1224	1306	675	631	64·3	77·2	53·4	73	0·31	9·0	114·5	50·1
24	„ 15	2396	1201	1195	1247	635	612	56·8	64·0	51·7	89	1·73	7·9	115·4	3·3
25	„ 22	2636	1353	1283	1213	659	584	59·6	72·4	49·7	76	0·00	8·5	116·1	65·3
26	„ 29	2467	1265	1202	1265	699	566	64·1	77·1	52·1	71	0·02	5·2	115·8	54·1
27	July 6	2507	1285	1222	1350	720	630	63·3	74·6	53·7	71	0·00	8·3	115·1	51·3
28	„ 13	2506	1186	1120	1605	839	766	63·0	72·9	56·2	80	0·72	8·2	113·8	23·0
29	„ 20	2627	1341	1286	1556	816	740	58·7	69·9	51·3	80	0·43	9·0	112·2	28·1
30	„ 27	2376	1174	1202	1553	836	717	58·1	67·7	51·9	82	0·90	12·9	110·2	26·5
31	August 3	2481	1216	1265	1532	825	707	64·9	76·2	55·3	76	0·20	8·9	107·8	36·5
32	„ 10	2180	1129	1051	1366	710	656	60·4	72·8	52·0	80	0·46	11·8	105·2	46·0
33	„ 17	2715	1392	1323	1382	711	671	59·3	69·7	52·5	82	0·19	11·2	102·3	26·8
34	„ 24	2358	1218	1140	1240	674	566	57·8	68·1	51·1	80	0·98	13·1	99·4	26·2
35	„ 31	2425	1240	1185	1263	660	603	60·2	73·0	48·5	74	0·00	8·2	96·4	53·9
36	Sept. 7	2373	1215	1158	1170	605	565	60·5	69·1	55·2	88	0·54	4·4	93·1	22·6
37	„ 14	2432	1279	1153	1236	652	584	63·0	74·6	53·8	76	0·00	6·7	90·0	43·4
38	„ 21	2344	1213	1131	1267	649	618	51·1	62·2	41·6	74	0·25	9·4	86·9	40·2
39	„ 28	2504	1294	1210	1361	669	692	50·6	58·9	42·9	80	0·85	14·2	83·6	17·4
40	October 5	2364	1180	1184	1381	728	653	48·9	56·7	43·8	89	0·90	11·5	80·5	10·0
41	„ 12	2595	1368	1227	1321	679	642	49·8	58·4	42·6	82	0·57	13·5	77·3	31·1
42	„ 19	2518	1287	1231	1410	721	689	49·4	57·8	41·6	88	0·70	8·5	74·2	17·3
43	„ 26	2580	1308	1272	1310	686	624	46·7	53·7	41·5	94	1·07	7·4	71·1	8·1
44	Nov. 2	2623	1316	1307	1317	673	644	47·3	54·0	41·4	88	0·78	12·3	68·0	23·1
45	„ 9	2658	1339	1319	1350	676	674	47·3	53·3	40·8	90	0·26	9·0	65·1	3·9
46	„ 16	2522	1275	1247	1451	748	703	46·8	52·7	41·0	93	0·01	5·2	62·5	11·9
47	„ 23	2517	1301	1216	1375	690	685	44·9	48·2	41·3	94	0·13	4·8	60·0	0·0
48	„ 30	2321	1202	1119	1448	729	719	37·6	43·4	32·0	84	0·32	14·0	57·7	5·9
49	Dec. 7	2270	1139	1131	1633	820	863	32·1	35·8	27·8	85	0·23	6·5	56·1	8·4
50	„ 14	2535	1323	1212	1768	901	867	38·1	42·5	31·9	92	0·23	11·5	54·9	4·4
51	„ 21	2509	1263	1246	1816	909	907	43·5	47·3	38·1	94	0·33	12·9	54·1	2·1
52	„ 28	1815	927	888	1690	869	821	39·8	44·0	35·2	90	0·61	11·2	54·2	3·2

TABLE 23.—**Greenwich Meteorological Elements** for the Year 1889. By J. GLAISHER, Esq., F.R.S.

1889. Months.	Mean Reading of the Barometer.	Temperature of the Air. Highest by Day.	Lowest by Night.	Range in Month.	Mean of all Highest.	Mean of all Lowest.	Mean Daily Range.	Mean for the Month.	Departure from Average of 118 Years, 1771 1888.	Mean Temperature of the Dew Point.	Mean Elastic Force of Vapour.	Weight of Vapour in a Cubic Foot of Air.	Mean additional Weight required for Saturation.	Mean Degree of Humidity. Saturation = 100.	Mean Weight of a Cubic Foot of Air.	Relative Proportion of Wind. N.	E.	S.	W.	Mean Amount of Cloud.	Rain. Number of Days it fell.	Amount collected.
	in.	°	°	°	°	°	°	°	°	°	in.	grs.	grs.		grs.							in.
January -	29·990	55·6	19·8	35·8	47·5	32·2	9·3	37·1	+0·5	34·6	·200	2·3	0·3	91	559	8	5	10	8	8·2	12	0·84
February -	29·718	57·3	18·9	38·4	48·0	31·7	11·3	37·0	−1·9	32·1	·182	2·1	0·5	83	555	11	3	4	10	8·0	19	2·30
March -	29·804	60·0	18·7	41·3	48·7	33·4	15·3	40·6	−0·5	34·6	·200	2·4	0·6	89	552	9	5	8	9	7·8	14	1·32
April -	29·559	66·1	32·6	33·5	54·7	38·9	15·8	43·7	−0·4	40·6	·253	2·9	0·6	83	542	8	6	13	3	7·7	17	1·85
May -	29·662	85·2	41·0	44·2	67·2	47·9	19·3	56·5	+4·0	50·2	·364	4·1	1·0	80	531	8	8	10	5	6·6	15	3·30
June -	29·854	83·9	45·7	38·2	72·9	51·7	21·2	61·4	+3·2	53·5	·430	4·5	1·5	78	530	7	10	8	5	6·0	6	2·47
July -	29·759	81·2	47·5	33·7	71·5	53·8	18·2	61·0	−0·6	53·3	·408	4·6	1·4	77	529	7	5	9	10	6·5	16	2·07
August -	29·710	86·6	44·1	42·5	71·3	51·6	19·7	60·0	−0·9	53·3	·406	4·5	1·3	78	529	5	2	11	13	5·9	14	1·81
September	29·865	81·8	35·7	46·1	65·4	48·1	17·3	55·8	−0·8	49·4	·341	3·8	1·3	74	536	10	7	6	7	6·2	7	1·68
October -	29·521	61·9	34·9	27·0	56·4	42·2	14·2	48·6	−0·9	45·5	·305	3·4	0·4	89	538	7	7	12	5	7·3	17	3·93
November	30·043	61·1	27·7	33·4	49·7	38·8	10·9	44·3	+1·9	41·2	·259	2·9	0·4	89	552	8	7	8	7	7·5	9	0·78
December	30·010	53·1	22·0	31·1	41·7	32·5	9·2	37·6	−1·5	35·2	·205	2·4	0·2	91	559	5	6	12	8	7·5	13	1·44
Means	29·791	69·3	32·4	36·9	57·0	41·9	15·1	48·8	+0·2	45·6	·294	3·3	0·8	83	542	93	71	111	90	7·1	159	23·29
																		Sums			Sums	Sum

TABLE 24.—METEOROLOGICAL TABLE FOR LONDON, 1889.

(Deduced from Observations, at Greenwich, under the Superintendence of the Astronomer Royal, and compiled from Quarterly Tables, furnished to the Registrar General by James Glaisher, Esq., F.R.S.)

Winter . . Jan., Feb., March. Spring . . April, May, June. Summer . . July, Aug., Sept. Autumn . . Oct., Nov., Dec.	Temperature of Air. Mean.	Temperature of Air. Diff. from Average of 118 Years.	Temperature of Air. Diff. from Average of 48 Years.	Temperature of Evaporation. Mean.	Temperature of Evaporation. Diff. from Average of 48 Years.	Temperature of Dew Point. Mean.	Temperature of Dew Point. Diff. from Average of 48 Years	Air—Daily Range. Mean.	Air—Daily Range. Diff. from Average of 48 Years.	Elastic Force of Vapour. Mean.	Elastic Force of Vapour. Diff. from Average of 48 Years.	Weight of Vapour in a Cubic Foot of Air. Mean.	Weight of Vapour in a Cubic Foot of Air. Diff. from Average of 48 Years.	Degree of Humidity. Mean (Sat^{n} = 100).	Degree of Humidity. Diff. from Average of 48 Years.	Reading of Barometer. Mean.	Reading of Barometer. Diff. from Average of 48 Years.	Weight of a Cubic Foot of Air. Mean.	Weight of a Cubic Foot of Air. Diff. from Average of 48 Years.	Rain. Amount.	Rain. Diff. from Average of 74 Years.	Reading of Thermometer on Grass. Number of Nights it was: At or below 30°.	Between 30° and 40°.	Above 40°.	Lowest Reading at Night.	Highest Reading at Night.
1889.	°	°	°	°	°	°	°	°	°	in.	in.	grs.	gr.			in.	in.	grs.	grs.	Sums. in.	Sums. in.	Sums.				°	°
YEAR .	48·8	+0·2	−0·5	46·2	−0·2	43·6	+0·1	15·1	−0·6	·234	·000	3·3	−1	83	+1	29·791	−·018	542	+1	23·29	−1·69	99	122	144		12·3	57·9
Winter Quarter .	38·2	−0·6	−1·5	36·3	−1·6	33·8	−1·5	12·0	+0·3	·194	−·013	2·3	−2	84	+1	29·837	+·070	555	+3	4·3	−0·62	53	34	3		12·3	42·3
Spring do. .	54·5	+2 3	+1·8	51·2	+2·2	48·1	+2·8	18·8	−1·2	·342	+·036	3·8	+3	80	+5	29·692	−·091	534	−4	7·22	+1·64	8	26	57		24·7	56·4
Summer do. .	58·9	−0·8	−1·3	55·3	−1·1	52·0	−1·0	18·4	−1·3	·382	−·023	4·3	−3	76	−1	29·778	−·016	531	+1	5·56	−1·76	4	12	76		26·1	57·9
Autumn do. .	43·5	−0·2	−1·2	42·2	−0·3	40·6	0·0	11·4	−0·3	·256	−·001	2·9	−3	90	0	29·858	+·111	550	+3	6·15	−0·95	34	50	8		14·6	50·0

In this Table + and − respectively signify that the number in the *preceding* column are *above* or *below* the average to the amount of the quantities to which these signs are affixed.

TABLE 25.—**Houses, &c.** supplied, and **Average Daily Quantity of Water** DELIVERED, by the **London Water Companies** in each MONTH of the Year 1889.

COMPANIES.	NUMBER OF HOUSES, &c. SUPPLIED IN											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Total Houses supplied -	747,067	747,598	748,727	749,655	750,954	751,877	753,479	754,464	755,821	756,938	757,705	758,556
FROM THAMES - - - -	359,910	360,153	360,786	361,408	361,988	362,662	363,086	363,624	364,359	364,870	365,150	365,574
FROM LEA AND FROM OTHER SOURCES -	387,157	387,445	387,941	388,247	388,966	389,215	390,393	390,840	391,462	392,068	392,555	392,982
FROM THAMES.												
CHELSEA - - - - -	34,803	34,823	34,835	34,881	34,922	34,967	35,026	35,070	35,100	35,129	35,149	35,197
WEST MIDDLESEX - - -	71,095	71,095	71,339	71,541	71,647	71,876	71,876	71,971	72,256	72,430	72,430	72,562
SOUTHWARK AND VAUXHALL - -	110,483	110,572	110,707	110,854	110,993	111,112	111,255	111,370	111,504	111,596	111,687	111,736
GRAND JUNCTION - - -	55,138	55,161	55,243	55,325	55,416	55,497	55,563	55,617	55,678	55,748	55,802	55,870
LAMBETH - - - -	88,388	88,502	88,662	88,807	89,010	89,210	89,366	89,596	89,821	89,967	90,082	90,209
FROM LEA AND FROM OTHER SOURCES.												
NEW RIVER - - - -	151,933	151,949	151,975	152,171	152,234	152,369	152,621	152,754	152,871	153,031	153,050	153,133
EAST LONDON - - - -	163,636	163,796	164,109	164,357	164,686	164,686	165,343	165,581	166,023	166,295	166,491	166,619
KENT - - - - -	71,588	71,700	71,857	71,719	72,046	72,160	72,429	72,505	72,558	72,742	73,014	73,230

COMPANIES.	AVERAGE DAILY SUPPLY OF WATER IN GALLONS DURING THE MONTHS OF											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
Total Quantities supplied -	156,769,477	156,558,624	155,425,673	156,329,633	168,223,098	180,877,584	186,383,263	178,075,702	177,725,797	170,403,008	164,599,821	163,651,490
FROM THAMES - - - -	76,854,783	77,231,638	77,582,844	77,497,914	84,305,006	91,461,781	93,636,938	88,548,191	88,925,771	85,267,475	83,644,525	82,662,756
FROM LEA AND FROM OTHER SOURCES -	79,914,694	79,326,986	77,842,829	78,831,719	83,918,092	89,415,803	92,746,265	89,527,511	88,800,026	85,135,533	80,955,296	80,988,734
FROM THAMES.												
CHELSEA - - - - -	8,814,086	8,986,678	9,072,930	9,021,881	9,708,123	10,215,697	10,337,617	9,592,104	9,731,123	9,518,969	9,193,283	9,557,123
WEST MIDDLESEX - - -	14,087,905	14,064,878	13,977,435	14,188,616	15,766,945	17,163,359	17,247,468	15,760,082	15,922,926	15,512,287	14,994,047	15,043,004
SOUTHWARK AND VAUXHALL - -	21,207,798	21,822,456	21,787,724	22,230,205	23,761,913	25,503,716	25,809,461	25,406,816	24,572,920	23,863,965	23,825,321	24,208,392
GRAND JUNCTION - - -	16,456,594	16,030,626	16,114,125	16,010,012	17,295,625	19,104,609	19,250,692	17,725,159	18,444,702	17,501,890	17,257,274	16,828,037
LAMBETH - - - -	16,291,490	16,327,000	16,330,600	16,047,200	17,772,400	19,469,400	21,000,700	20,064,009	20,254,100	18,871,264	18,374,600	18,026,200
FROM LEA AND FROM OTHER SOURCES.												
NEW RIVER - - - - -	29,057,000	28,514,000	27,800,000	29,474,000	30,684,000	33,830,000	35,437,000	33,171,000	33,160,000	31,324,000	30,078,000	29,919,000
EAST LONDON - - - -	39,569,152	39,753,196	38,760,052	38,021,132	41,011,349	42,227,937	44,274,138	43,597,343	43,204,492	42,049,766	39,408,017	39,629,964
KENT - - - - -	11,288,542	11,059,790	11,282,777	11,336,587	12,222,743	13,307,806	13,035,127	12,759,168	12,435,534	11,770,767	11,469,279	11,439,770

Note.—The quantities of water in the above Table include the supply for various purposes other than for domestic consumption.

Table 26.—Houses, &c. supplied, and **Average Daily Quantity of Water** delivered for all Purposes and for Domestic Purposes, by the **London Water Companies** during 1889.

Water Companies.	Average Number of Houses supplied during the Year.	Average Daily Supply of Water during the Year.				
		Delivered.		Used for Domestic purposes.†		
		Gallons.	Cubic Metres.*	Gallons.	Gallons per House.	
					1888.	1889.
Total	752,737	167,918,593	762,931	137,693,246	180	183
From Thames	362,798	83,968,302	381,506	68,854,007	186	190
From Lea and from other Sources	389,939	83,950,291	381,425	68,839,239	174	177
From Thames.						
Chelsea	34,992	9,479,060	43,068	7,772,829	221	222
West Middlesex	71,843	15,311,165	69,566	12,555,155	174	175
Southwark and Vauxhall	111,156	23,582,393	107,145	19,337,562	173	174
Grand Junction	55,505	17,359,945	78,874	14,235,155	247	256
Lambeth	89,302	18,235,739	82,853	14,953,306	160	167
From Lea and from other Sources.						
New River	152,507	31,041,500	141,036	25,454,030	163	167
East London	165,136	40,958,133	186,092	33,585,669	202	203
Kent	72,296	11,950,658	54,297	9,799,540	136	136
Columns	1.	2.	3.	4.	5.	6.

* A cubic metre is equal in volume to 35·3 cubic feet, or to 220·09668 imperial gallons. It is nearly equivalent to the old English *tun* of four hogsheads, holding 35·248 cubic feet. It is in general use on the Continent; and its volume of water weighs a metric *ton*, differing inconsiderably in weight from the *ton* in common use. 1 is equal to 100 decalitres; thus a decalitre equals 2·2009668 gallons.

† According to returns of the London Water Companies made to the Select Committee on East London Water Bills (Session 1867), it is estimated that during the year 1866 about 82 per cent. of the total supply of water for all purposes was for domestic use; this proportion has been applied in estimating the quantities in columns 4, 5, and 6, showing the gallons probably used for domestic purposes. The average daily quantity of water supplied by the London Companies during the year 1889 was 167,918,593 gallons (762,931 cubic metres, equal to about as many *tuns* by measure, *tons* by weight), of which about 137,693,246 gallons (625,603 cubic metres) were probably used for domestic purposes. The average quantity used daily for domestic purposes in each house (see Col. 6) is equal to 83·1 decalitres, and, assuming 7·8 persons to each house, corresponds to 23·5 gallons (10·7 decalitres) to each person. The Returns of the Water Companies include uninhabited houses.

REPORT on the ANALYSES of the WATERS supplied by the METROPOLITAN WATER COMPANIES during the several MONTHS of the YEAR 1889. By Professor FRANKLAND, D.C.L., LL.D., F.R.S., &c.

Water-analysis Laboratory, The Yews, Reigate,
SIR, *10th February* 1890.

DURING the year 1889, I have examined and analysed 120 samples of water supplied by the eight Metropolitan Water Companies, the Colne Valley Water Company, and the Tottenham Local Board of Health, and I have now to supplement my monthly reports upon these waters by a general summary of the results of the analyses and by my observations thereon.

The weather during the past year has, on the whole, been favourable for the operations of those Companies which derive their supplies from rivers, and as the increased efficiency of subsidence and filtration observed for several years past has been fully maintained, the water delivered by these Companies has been, on the average, of even better quality than that delivered during the year 1888.

All the samples examined were taken directly from the mains of the several Companies at places recommended by their respective engineers. In addition to the chemical analysis to which each sample has been submitted, the temperature of the water as it issued from the main at the time of its collection has been determined, and the appearance which it exhibited on being viewed in a two-foot tube has been recorded. The temperatures and the results of the chemical analyses are contained in the accompanying Tables A. to L.

Table A. gives the temperatures of the waters at the time of their collection. From this Table it will be seen that, although the average temperature differs but little for the several supplies, the monthly variation in the case of the river waters is very great, whilst the temperature of the deep-well water is practically constant throughout the year. Thus the water, principally derived from the Thames and supplied by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies, varied in temperature from 21°·2 C. (70°·2 Fahr.) in July to 3°·2 C. (37°·8 Fahr.) in December, and the water from the Lea distributed by the New River and East London Companies, fluctuated from 20°·5 C. (68°·9 Fahr.) in July to 3°·9 C. (39°· Fahr.) in December. On the other hand, the temperature of the deep-well water delivered by the Kent Company varied only between 13° C. (55°·4 Fahr.) in July to 10°·6 C. (51°·1 Fahr.) in February. The great uniformity in temperature of deep-well water is of considerable importance, as the water remains cool and refreshing in summer and is less likely to become frozen in the service-pipes in winter, whilst river water at 70° or even 65° Fahr. is vapid and unpalatable, and at 39° Fahr. is soon cooled to the freezing point.

Table B. gives the total amount of solid matters found in 100,000 parts by weight of the various waters. These solid matters are almost wholly composed of mineral substances, which, in these proportions, in no way diminish the fitness of water for drinking. But the salts of lime and magnesia which constitute the principal part of these mineral ingredients are objectionable, not only because they impart to the water what is known as "hardness," and thus render it unsuitable for washing, but also because they cause incrustations and deposits in steam and kitchen boilers and hot-water pipes. The small proportion of organic material which the solid matter invariably contains, is, on the other hand, of the greatest importance in connexion with the use of the water for drinking purposes. For, although the actual amount of this organic matter is generally quite insignificant, yet it may be of the most objectionable character on account of its origin. Thus the water both of the Thames and the Lea receives, above the points where it is abstracted for the purpose of the metropolitan supply, various contributions of organic matter of

animal origin, such as the drainage from manured land, the effluents from sewage works, and even raw sewage itself. This animal matter may, at any time, be accompanied by zymotic poisons dangerous to health, and although the chance of such substances reaching the water consumer are greatly reduced, both by the filtration to which the water is subjected by the Companies and by the care which is exercised in excluding the flood waters from their reservoirs; yet in spite of these protective measures there is no absolute guarantee that the noxious ingredients, which may at any time be present, are wholly removed. Under these circumstances, every encouragement should be given to the Companies in their efforts to improve the selection and purification of the water and to prevent the pollution of the sources of supply.

The amount of solid matter in the deep-well water from the chalk is considerably greater than that in the river-water, and inasmuch as this chalk water is sent out in its natural condition by the Kent Company and by the Tottenham Local Board of Health, these supplies contain more solid matter than any of the others. The Colne Valley Company, on the other hand, by treating this chalk water with lime before delivery, so reduced the solid matter that the latter did not much exceed one-half of the amount present in the river waters, and was considerably less than one-half of that in the deep-well waters either of the Kent Company or of the Tottenham Local Board of Health.

In Tables C. and D. the amount of organic carbon and organic nitrogen, as determined by combustion with oxide of copper, in each of the waters is recorded. Since these are the only two ingredients of the organic matter which can be accurately determined, these results are the only available evidence of the relative proportions of total organic matter present in the waters. These Tables show that during the greater part of the year the river waters, both from the Thames and the Lea, contained only a very moderate amount of organic matter. The New River Company's water was invariably superior, in this respect, to all the other river-derived supplies. The proportion of organic matter in the deep-well waters of the Kent and Colne Valley Companies, and in that of the Tottenham Local Board of Health, was invariably very small.

Taking the mean proportion of organic impurity contained in the Thames water delivered in 1868 as 1,000, I find that in the subsequent years, 1889 included, the following proportions were present :—

Year.	Proportion of organic impurity present in Thames water as delivered in London.
1868	1,000
1869	1,016
1870	795
1871	928
1872	1,243
1873	917
1874	933
1875	1,030
1876	903
1877	907
1878	1,056
1879	1,165
1880	1,254
1881	993
1882	1,033
1883	850
1884	723
1885	839

Year.	Proportion of organic impurity present in Thames water as delivered in London.
1886	756
1887	690
1888	722
1889	677

These figures show that the Thames water supplied during the year 1889 was superior to that of any former year as regards comparative freedom from organic impurity.

Of the water chiefly derived from the river Lea, that supplied by the New River Company contained, in every case, less organic matter than that of the East London Company, which generally ranked in this respect with the best of the Thames waters.

Taking, as before, the mean proportion of organic impurity contained in the Thames water delivered in 1868 as 1,000, I find that in the subsequent years 1889 included, the following proportions were present in the Lea water :—

Year.	Proportion of organic impurity present in Lea water as delivered in London.
1868	484
1869	618
1870	550
1871	604
1872	819
1873	693
1874	583
1875	751
1876	562
1877	596
1878	747
1879	947
1880	1,013
1881	765
1882	711
1883	620
1884	500
1885	603
1886	500
1887	473
1888	506
1889	504

Thus the Lea water was of better average quality than that of the Thames, and it has rarely contained less organic matter during the previous twenty-one years.

The organic matter found in the deep-well water supplied to London during the past twenty-two years is of course much less. Referred to the same standard, the figures are as follow :—

Year.	Proportion of organic impurity present in deep-well water as delivered in London.
1868	254
1869	312
1870	246
1871	150

Year.	Proportion of organic impurity present in deep-well water as delivered in London.
1872	221
1873	250
1874	287
1875	250
1876	246
1877	243
1878	323
1879	387
1880	393
1881	405
1882	409
1883	321
1884	264
1885	200
1886	244
1887	249
1888	241
1889	268

A comparison of these figures with those referring to the Thames and Lea does not, however, adequately represent the superiority, from the sanitary point of view, of the deep-well water, for it must be borne in mind that the exhaustive filtration which the deep-well water undergoes in passing through a great depth of porous strata is far in excess of what can be effected by the sand filtration, highly valuable as it is, to which the river waters are subjected.

Table E. shows the proportional amount of organic elements (organic carbon and organic nitrogen) in each of the waters, the average amount of these elements contained in the Kent Company's water during the nine years ending December 1876 being taken as unity. This Table shows that the maximum, minimum, and average proportions of organic matter, as measured by this standard, present in the several waters during 1889, were :—

Sources.		Maximum.	Minimum.	Average.
Deep wells	Kent	1·1	0·4	0·7
	Colne Valley	1·6	1·2	1·4
	Tottenham	1·7	0·5	1·3
River Lea	New River	2·1	0·6	1·5
	East London	3·5	1·2	2·7
River Thames	Chelsea	5·1	1·4	3·2
	West Middlesex	5·1	1·6	2·9
	Southwark	5·0	1·6	2·7
	Grand Junction	5·2	1·5	2·5
	Lambeth	4·2	1·6	2·5

Thus, of the deep-well waters, that supplied by the Kent Company contained least organic matter, whilst of the river waters, that supplied by the New River Company was the best in this respect, the East London Company's water ranking with the best of the Thames waters.

The five Thames waters did not differ much from each other in respect of organic matter, but the Lambeth Company's supply was the best, and exhibited the greatest uniformity of quality throughout the year.

The following Table exhibits the maximum amount of organic matter in the waters supplied from the Thames and Lea during the years 1868 to 1889 inclusive, the average of the samples from each source in the month of greatest impurity being taken for comparison :—

MAXIMUM AMOUNT OF ORGANIC MATTER.

THAMES.			LEA.		
Year.	Elements of organic matter in parts per 100,000.	Months in which maximum pollution occurred.	Year.	Elements of organic matter in parts per 100,000.	Months in which maximum pollution occurred.
1868	·45	January.	1868	·27	February.
1869	·60	February.	1869	·33	February.
1870	·42	January.	1870	·30	January.
1871	·52	October.	1871	·22	February.
1872	·48	January & December.	1872	·39	December.
1873	·46	January.	1873	·33	January.
1874	·37	March.	1874	·21	March.
1875	·49	November.	1875	·28	November.
1876	·44	December.	1876	·24	March.
1877	·40	January.	1877	·30	January.
1878	·36	December.	1878	·26	June.
1879	·38	February.	1879	·33	July.
1880	·42	October.	1880	·33	February.
1881	·34	February.	1881	·34	February.
1882	·37	November.	1882	·26	December.
1883	·32	January.	1883	·24	December.
1884	·27	February.	1884	·20	March.
1885	·35	November.	1885	·28	December.
1886	·30	December.	1886	·21	February.
1887	·34	January.	1887	·31	January.
1888	·35	December.	1888	·29	December.
1889	·31	January.	1889	·21	November.

This Table shows that the maximum amount of organic contamination, which had been increasing of late years, fell in 1889 nearly to the lowest amount previously observed.

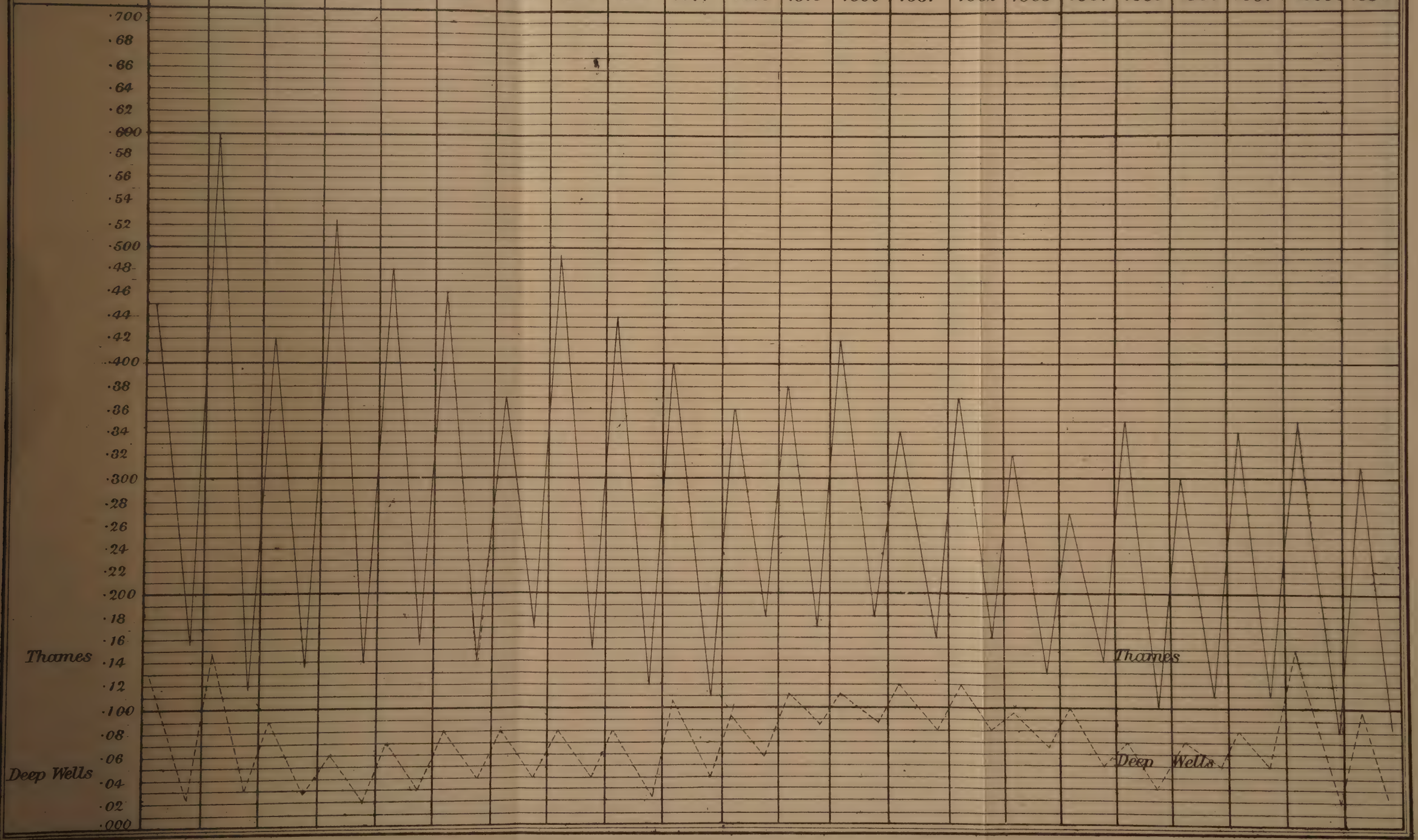
The variations in the proportion of organic matter found in the several supplies is exhibited graphically in the accompanying diagrams (A. & B.), in which the maximum and minimum proportions of organic matter annually present in each of the three classes of waters since 1868 are recorded.

Tables F. and G., which record the proportions of ammonia and of nitrogen as nitrates and nitrites in the various waters, require no explanation.

In Table H. is given the amount of combined nitrogen, both mineral and organic, found in each of the waters. The total amount of combined nitrogen is of importance, inasmuch as, after making a small correction for the combined nitrogen present in average rain-water, it forms the whole evidence of the nitrogenous organic matters which have gained access to the water in the past, as well as of those which are still present at the time the analysis is made. In river and surface water generally, this total combined nitrogen undergoes a very appreciable reduction during the warmer months of the year, in consequence of the vegetable life which then abounds in such water. On this account, therefore, the amount of total

Maximum and Minimum Proportion of Organic Matter in Water from Thames and Deep Wells.

(*A)



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MAXIMUM & MINIMUM PROPORTION OF ORGANIC MATTER IN RIVER LEA WATER.

(*B)

Elements of Organic Matter in Parts per 100,000.	*1868*	*1869*	*1870*	*1871*	*1872*	*1873*	*1874*	*1875*	*1876*	*1877*	*1878*	*1879*	*1880*	*1881*	*1882*	*1883*	*1884*	*1885*	*1886*	*1887*	*1888*	*1889*
·700																						
·68																						
·66																						
·64																						
·62																						
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·04																						
·02																						
·000																						

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combined nitrogen found in the river waters during the winter months can alone be regarded as bearing any relationship to the amount of nitrogenous matters which these waters have received.

The deep-well waters on the other hand are not subject to the influence of vegetable life, and the amount of total combined nitrogen is, therefore, equally indicative at all times of the year.

Hence, in the following Table, the average proportion of total combined nitrogen in the case of the Thames and Lea is given for the months of January, February, March, October, November, and December only, whilst in the case of the deep-wells it is calculated on the whole year :—

Year.	Thames.	Lea.	Deep-Wells.
1880	·276	·284	·294
1881	·260	·294	·306
1882	·258	·304	·294
1883	·259	·329	·353
1884	·244	·273	·301
1885	·233	·277	·292
1886	·319	·336	·355
1887	·307	·352	·365
1888	·304	·322	·358
1889	·311	·358	·438

A comparison of these numbers shows that there is, with but slight interruptions, a continuous increase of total combined nitrogen in all three classes of water, the greatest augmentation however is observed in the deep-well waters; but this is almost entirely due to the great increase of this ingredient in the Tottenham water, the proportion in this case having risen from ·171 in 1888 to ·357 in 1889.

Table I. shows the amount of chlorine present in each of the waters, and indicates that on no occasion has brackish or tidal water gained access to the Company's reservoirs. The amount of chlorine in the river waters, upon which I commented last year has not been further augmented, but there is a considerable increase in all the deep-well waters.

Table K. gives the hardness of the various waters. The term "hardness" is used to denote the proportion of carbonate of lime, or its equivalent of other soap-destroying substances, present in 100,000 parts of the water. The variations in hardness for the several descriptions of water during recent years are given in the following Table :—

Year.	Thames.	Lea.	Kent.	Colne Valley.	Tottenham.
1881	19°·8	20°·8	28°·3	6°·2	24°·1
1882	20°·7	21°·1	28°·5	5°·5	25°·4
1883	19°·9	20°·6	28°·0	7°·1	22°·5
1884	19°·4	20°·1	28°·6	5°·2	19°·7
1885	18°·7	20°·0	27°·9	4°·8	20°·4
1886	19°·2	20°·3	29°·4	4°·5	21°·3
1887	19°·3	20°·8	29°·9	5°·7	20°·5
1888	20°·0	22°·0	30°·2	7°·5	22°·5
1889	20°·2	22°·1	29°·9	7°·0	24°·6

None of the waters supplied to the Metropolis are of such excessive hardness as to influence their fitness for drinking; but, with the exception of that supplied by the Colne Valley Company, the hardness is sufficiently great to materially diminish the value of the waters for washing, steam, and industrial purposes generally. The hardness of the metropolitan water supply is almost entirely due to the presence of bi-carbonate of lime in solution; this bi-carbonate of lime can be readily removed

by treating the water with lime, as is so successfully done by the Colne Valley Company. Thus the water pumped from the chalk by the Colne Valley Company is initially of about the same degree of hardness as the Kent Company's supply, but, by treatment with lime before delivery, its hardness is reduced to from one-fourth to one-fifth of its original amount. The hardness of the river water-supplies is similarly reducible. This mode of softening is by far the most economical, for it entails only about one-eightieth of the expense which devolves upon the private consumer in the shape of additional soap required for washing purposes.

Lastly, Table L. records the averages, for the past year, of each determination referred to above, and thus gives a general survey of the thermal and chemical characters of the water delivered by each Company during the past year.

In the following Table are recorded the results of my observations respecting the freedom from turbidity or otherwise of the various waters, and for the purpose of comparison, the results of my first observations in 1868 are also included :—

Companies or Local Authorities.	Number of occasions when clear and transparent.		Number of occasions when slightly turbid.		Number of occasions when turbid.		Number of occasions when very turbid.	
Thames.	1868.	1889.	1868.	1889.	1868.	1889.	1868.	1889.
Chelsea	7	12	2	0	1	0	2	0
West Middlesex	12	12	0	0	0	0	0	0
Southwark	1	11	5	1	4	0	2	0
Grand Junction	9	11	2	0	1	1	0	0
Lambeth	6	12	1	0	2	0	3	0
Lea.								
New River	10	12	2	0	0	0	0	0
East London	3	12	8	0	1	0	0	0
Deep Wells.								
Kent	8	12	3	0	1	0	0	0
Colne Valley	–	12	–	0	–	0	–	0
Tottenham Local Board of Health	–	10	–	2	–	0	–	0

This Table reveals more cases of inefficient filtration than have occurred for some years past. The foul condition of the Thames in January taxed the filters of the Companies to the utmost and the Southwark and Grand Junction Companies were delivering opalescent and imperfectly filtered water on New Year's day. The rest of the river-derived waters were clear and transparent throughout the year. Of the deep-well waters, which require no filtration, the Kent and Colne Valley Companies always delivered clear and transparent water, but the Tottenham Local Board of Health supplied slightly turbid water in January and again in March. The turbidity of this water in January was due to particles of iron rust which quickly subsided and left the water clear.

No moving organisms were found in any of the turbid samples.

I am, &c.

E. Frankland.

The Registrar General, &c., &c.
Somerset House, W.C.

Table A.

Temperature (in Centigrade degrees) of the Metropolitan Waters, as delivered from the different Companies' Mains.

	Companies or Local Authorities.	1889. Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
		°	°	°	°	°	°	°	°	°	°	°	°	°
Inner Circle.	Thames.													
	Chelsea	7·5	10·4	5·6	7·3	12·8	17·7	19·0	16·8	17·8	10·8	9·6	5·3	11·7
	West Middlesex	7·3	8·4	5·7	8·4	15·8	18·5	21·0	17·3	18·8	11·1	10·2	4·7	12·3
	Southwark	7·4	8·0	5·8	8·3	14·8	17·5	20·1	16·9	17·9	10·1	9·7	5·0	11·8
	Grand Junction	6·5	8·2	5·0	8·2	15·2	19·5	21·2	16·1	18·7	9·8	9·2	3·2	11·7
	Lambeth	7·8	7·6	6·1	8·2	13·8	17·6	20·1	16·9	18·4	11·0	9·6	4·3	11·8
	Lea.													
	New River	7·2	8·3	5·5	8·4	13·0	18·7	19·5	16·4	17·4	10·2	9·2	3·9	11·5
	East London	6·8	8·0	5·5	8·2	14·0	18·3	20·5	16·5	17·6	11·0	9·4	4·4	11·7
	Deep Wells.													
	Kent	12·7	10·6	12·5	11·6	12·5	11·8	13·0	12·7	12·5	12·2	12·2	12·2	12·2
Outer Circle.	Colne Valley	—	—	—	—	—	—	—	—	—	—	—	—	—
	Tottenham Local Board	—	—	—	—	—	—	—	—	—	—	—	—	—

Table B.

Weight of Solid Matters in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889. Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	32·50	32·30	30·72	28·44	27·40	27·78	26·94	23·82	23·66	27·60	30·60	31·10	28·52
	West Middlesex	32·20	33·46	31·74	29·02	28·20	29·14	26·66	24·52	25·04	27·38	34·46	31·42	29·44
	Southwark	32·24	33·74	32·58	30·94	29·44	30·00	28·08	26·50	26·80	27·62	32·20	31·76	30·16
	Grand Junction	31·76	33·86	32·78	30·46	26·00	28·38	27·26	25·92	26·14	28·06	32·26	31·86	29·66
	Lambeth	33·92	33·30	33·80	31·30	28·84	29·76	27·30	26·60	26·32	27·66	32·66	32·10	30·30
	Lea.													
	New River	33·50	33·16	31·34	29·50	27·28	30·14	29·56	28·18	28·96	31·06	32·86	33·00	30·71
	East London	39·64	38·86	36·48	34·76	31·00	32·50	31·30	27·88	28·82	31·26	37·74	36·10	33·86
	Deep Wells.													
	Kent	44·40	34·90	40·70	43·80	41·60	44·14	43·56	43·60	43·74	43·04	43·06	42·60	42·43
Outer Circle.	Colne Valley	18·40	17·04	17·60	17·90	17·80	18·70	18·24	18·74	19·00	16·70	18·38	17·30	17·98
	Tottenham Local Board	43·32	37·28	45·00	40·82	41·20	40·20	40·44	50·60	47·84	51·00	49·70	46·00	44·45

Table C.

Organic Carbon in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889. Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	·256	·206	·218	·160	·144	·186	·065	·095	·111	·146	·190	·144	·160
	West Middlesex	·256	·151	·187	·156	·124	·125	·109	·077	·117	·153	·163	·117	·145
	Southwark	·243	·121	·124	·124	·109	·147	·073	·086	·086	·198	·160	·127	·133
	Grand Junction	·253	·095	·079	·080	·118	·067	·095	·083	·110	·162	·141	·136	·118
	Lambeth	·203	·132	·101	·114	·120	·092	·079	·092	·122	·157	·131	·129	·123
	Lea.													
	New River	·069	·096	·078	·064	·106	·071	·028	·052	·057	·106	·045	·039	·068
	East London	·151	·149	·173	·147	·114	·134	·152	·054	·097	·095	·173	·142	·132
	Deep Wells.													
	Kent	·024	·020	·019	·014	·041	·045	·021	·020	·050	·054	·038	·024	·031
Outer Circle.	Colne Valley	·057	·056	·075	·072	·073	·053	·065	·060	·069	·082	·068	·055	·065
	Tottenham Local Board	·080	·021	·066	·048	·053	·043	·028	·080	·082	·085	·058	·072	·060

Table D.

Organic Nitrogen in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889.												
		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	·045	·030	·043	·033	·020	·037	·018	·021	·025	·019	·047	·034	·031
	West Middlesex	·042	·030	·033	·038	·020	·030	·022	·018	·024	·023	·030	·025	·028
	Southwark	·051	·020	·030	·027	·021	·054	·019	·018	·024	·020	·027	·021	·028
	Grand Junction	·055	·026	·030	·024	·023	·022	·021	·023	·023	·025	·026	·026	·027
	Lambeth	·047	·030	·023	·024	·017	·028	·017	·018	·027	·025	·029	·027	·026
	Lea.													
	New River	·020	·024	·027	·016	·014	·023	·010	·014	·025	·020	·010	·011	·018
	East London	·026	·026	·034	·032	·018	·026	·026	·018	·024	·015	·035	·037	·026
	Deep Wells.													
	Kent	·007	·009	·008	·007	·009	·005	·005	·006	·016	·011	·008	·011	·009
Outer Circle.	Colne Valley	·018	·016	·014	·016	·018	·017	·015	·016	·017	·011	·017	·015	·016
	Tottenham Local Board	·014	·011	·015	·021	·014	·014	·011	·011	·015	·015	·011	·017	·014

Table E.

Proportional Amount of Organic Elements, that in the Kent Company's Water during the Nine Years ending December 1876 being taken as 1.

	Companies or Local Authorities.	1889.												
		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	5·1	4·0	4·4	3·3	2·8	3·8	1·4	1·9	2·3	2·8	4·0	3·0	3·2
	West Middlesex	5·1	3·1	3·7	3·3	2·4	2·6	2·2	1·6	2·4	3·0	3·3	2·4	2·9
	Southwark	5·0	2·4	2·6	2·6	2·2	3·4	1·6	1·8	1·9	3·7	3·2	2·5	2·7
	Grand Junction	5·2	2·1	1·8	1·8	2·4	1·5	2·0	1·8	2·3	3·2	2·8	2·7	2·5
	Lambeth	4·2	2·7	2·1	2·3	2·3	2·0	1·6	1·9	2·5	3·1	2·7	2·6	2·5
	Lea.													
	New River	1·5	2·0	1·8	1·4	2·0	1·6	0·6	1·1	1·4	2·1	0·9	0·8	1·5
	East London	3·0	3·0	3·5	3·0	2·2	2·7	3·0	1·2	2·1	1·9	3·5	3·0	2·7
	Deep Wells.													
	Kent	0·5	0·5	0·5	0·4	0·8	0·8	0·4	0·4	1·1	1·1	0·8	0·6	0·7
Outer Circle.	Colne Valley	1·3	1·2	1·5	1·5	1·5	1·2	1·4	1·3	1·5	1·6	1·4	1·2	1·4
	Tottenham Local Board	1·6	0·5	1·4	1·2	1·1	1·0	0·7	1·6	1·6	1·7	1·2	1·5	1·3

Table F.

Ammonia in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889.												
		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	0	0	0	0	0	0	0	0	0	0	0	0	0
	West Middlesex	0	0	0	0	0	0	0	0	0	0	0	0	0
	Southwark	0	0	0	0	0	0	0	0	0	0	0	0	0
	Grand Junction	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lambeth	0	0	0	0	0	0	0	0	0	0	0	0	0
	Lea.													
	New River	0	0	0	0	0	0	0	0	0	0	0	0	0
	East London	0	0	0	0	0	0	0	0	0	0	0	0	0
	Deep Wells.													
	Kent	0	0	0	0	0	0	0	0	0	0	0	0	0
Outer Circle.	Colne Valley	·017	·005	.085	0	·009	·016	·019	·009	·005	0	·018	·002	·015
	Tottenham Local Board	·030	·065	·035	·060	·050	·015	·065	·017	·040	·012	·056	·045	·041

Table G.

Nitrogen as Nitrates and Nitrites in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889. Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	·280	·303	·274	·252	·215	·207	·209	·145	·144	·204	·241	·273	·229
	West Middlesex	·273	·324	·306	·259	·222	·211	·192	·158	·163	·211	·264	·285	·239
	Southwark	·235	·306	·309	·239	·217	·213	·174	·156	·156	·205	·242	·259	·226
	Grand Junction	·286	·328	·353	·286	·194	·191	·187	·175	·154	·213	·272	·311	·246
	Lambeth	·282	·403	·370	·281	·230	·230	·154	·158	·162	·224	·265	·303	·255
	Lea.													
	New River	·331	·396	·374	·277	·226	·250	·251	·209	·218	·318	·334	·365	·296
	East London	·297	·411	·300	·275	·299	·239	·260	·208	·211	·293	·308	·283	·282
	Deep Wells.													
	Kent	·552	·511	·550	·500	·464	·449	·491	·537	·517	·514	·504	·523	·509
Outer Circle.	Colne Valley	·454	·409	·421	·347	·431	·406	·413	·404	·399	·397	·425	·425	·411
	Tottenham Local Board	·416	trace	·385	trace	·054	·021	trace	·573	·494	·691	·603	·473	·309

Table H.

Total combined Nitrogen in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889. Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	·325	·333	·317	·285	·235	·244	·227	·166	·169	·223	·288	·307	·260
	West Middlesex	·315	·354	·339	·297	·242	·241	·214	·176	·187	·234	·294	·310	·267
	Southwark	·286	·326	·339	·266	·238	·267	·193	·174	·180	·225	·269	·280	·254
	Grand Junction	·341	·354	·333	·310	·217	·213	·208	·198	·177	·238	·298	·337	·273
	Lambeth	·329	·433	·393	·305	·247	·258	·171	·176	·189	·249	·294	·330	·281
	Lea.													
	New River	·351	·420	·401	·293	·240	·273	·261	·223	·243	·338	·344	·376	·314
	East London	·323	·437	·334	·307	·317	·265	·286	·226	·235	·308	·343	·320	·308
	Deep Wells.													
	Kent	·559	·520	·558	·507	·473	·454	·496	·543	·533	·525	·512	·534	·518
Outer Circle.	Colne Valley	·486	·429	·505	·363	·456	·436	·444	·427	·420	·408	·457	·442	·439
	Tottenham Local Board	·455	·065	·429	·070	·109	·047	·065	·598	·542	·716	·660	·527	·357

Table I.

Chlorine in 100,000 parts of the Waters.

	Companies or Local Authorities.	1889. Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	Thames.													
	Chelsea	1·8	1·7	1·8	1·8	1·7	1·6	1·7	1·7	1·7	1·8	1·9	1·9	1·8
	West Middlesex	1·8	1·8	1·8	1·8	1·8	1·7	1·7	1·7	1·7	1·8	1·9	1·9	1·8
	Southwark	1·7	1·8	1·8	1·8	1·8	1·7	1·7	1·7	1·7	1·8	1·8	1·9	1·8
	Grand Junction	1·7	1·8	1·8	1·8	1·8	1·7	1·8	1·7	1·7	1·8	1·8	1·9	1·8
	Lambeth	1·8	1·8	1·8	1·8	1·8	1·7	1·7	1·7	1·7	1·8	1·9	1·9	1·8
	Lea.													
	New River	1·7	1·7	1·8	1·9	1·8	1·7	1·8	1·8	1·7	1·7	1·7	1·8	1·8
	East London	2·1	2·1	2·1	2·1	2·1	2·0	1·9	1·9	1·9	2·0	2·0	2·0	2·0
	Deep Wells.													
	Kent	2·6	2·0	2·6	2·6	2·6	2·6	2·6	2·7	2·5	2·6	2·5	2·6	2·5
Outer Circle.	Colne Valley	2·0	2·1	2·1	2·1	2·6	2·2	2·1	2·1	2·0	2·2	2·1	2·1	2·1
	Tottenham Local Board	3·0	2·4	3·1	2·8	2·9	2·9	2·9	3·4	3·2	3·4	3·5	3·3	3·1

TABLE K.

DEGREES of HARDNESS (1 deg. = 1 part of carbonate of lime, or its equivalent,) in 100,000 parts of the WATERS.

	COMPANIES OR LOCAL AUTHORITIES.	1889.											
		Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
Inner Circle.	THAMES.													
	Chelsea	22·1	22·1	20·3	18·9	18·3	18·3	18·0	15·4	16·0	18·9	20·3	21·5	19·2
	West Middlesex	21·5	23·3	21·2	19·4	18·9	19·1	18·0	17·5	16·6	19·1	22·1	22·1	19·9
	Southwark	22·1	23·3	22·1	20·6	20·0	20·6	18·6	18·3	18·2	19·4	22·1	22·7	20·7
	Grand Junction	21·3	23·6	22·4	20·9	18·6	19·7	18·3	18·3	18·2	19·7	22·1	22·7	20·5
	Lambeth	22·4	23·3	22·7	21·5	19·7	19·7	18·9	18·0	18·0	19·4	22·7	22·4	20·7
	LEA.													
	New River	24·5	23·9	21·5	20·0	19·1	20·3	19·4	19·1	19·7	22·7	23·6	23·9	21·5
	East London	26·0	26·6	23·0	21·5	20·6	21·5	20·0	18·9	19·7	22·1	26·0	26·3	22·7
	DEEP WELLS.													
	Kent	31·5	28·6	28·6	30·3	29·7	30·8	28·6	28·6	29·2	30·9	30·3	31·4	29·9
Outer Circle.	Colne Valley	6·7	6·3	7·4	6·9	7·6	7·7	6·7	7·1	8·1	6·0	6·9	6·7	7·0
	Tottenham Local Board	25·1	22·1	25·7	22·1	22·1	20·9	21·2	25·7	26·0	29·7	26·6	27·5	24·6

TABLE L.

AVERAGES FOR 1889.

The numbers in the Table relate to 100,000 parts of each Water.

	COMPANIES OR LOCAL AUTHORITIES.	Temperature in Centigrade Degrees.	Total Solid Matters.	Organic Carbon.	Organic Nitrogen.	Ammonia.	Nitrogen, as Nitrates and Nitrites.	Total combined Nitrogen.	Chlorine.	Total Hardness.	Proportional Amount of Organic Elements that in the Kent Company's Water during the 9 years ending Dec. 1889 being taken as 1.
		°									
Inner Circle.	THAMES.										
	Chelsea	11·7	28·52	·160	·031	0	·229	·260	1·8	19·2	3·2
	West Middlesex	12·3	29·44	·145	·028	0	·239	·267	1·8	19·9	2·9
	Southwark	11·8	30·16	·133	·028	0	·226	·254	1·8	20·7	2·7
	Grand Junction	11·7	29·56	·118	·027	0	·246	·273	1·8	20·5	2·5
	Lambeth	11·8	30·30	·123	·026	0	·255	·281	1·8	20·7	2·5
	LEA.										
	New River	11·5	30·71	·068	·018	0	·296	·314	1·8	21·5	1·5
	East London	11·7	33·86	·132	·026	0	·282	·308	2·0	22·7	2·7
	DEEP WELLS.										
	Kent	12·2	42·43	·031	·009	0	·509	·518	2·5	29·9	0·7
Outer Circle.	Colne Valley	—	17·98	·065	·016	·015	·411	·439	2·1	7·0	1·4
	Tottenham Local Board	—	44·45	·060	·014	·041	·309	·357	3·1	24·6	1·3

NOTE.—The numbers in these tables may be converted into grains per imperial gallon, by multiplying them by 7, and then moving the decimal point one place to the left.

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Fires in London during the Year 1889.

Captain Eyre M. Shaw, Chief Officer of the Metropolitan Fire Brigade, reported to the London County Council that the number of fires attended during 1889 was 2338, exceeding by 350 the number in the preceding year, and by 267 the average in the ten years 1879–88. According to this report the lives of 184 persons were seriously endangered, and 44 of these were lost. The numbers of lives lost by fires in London in the four preceding years were 47, 49, 55, and 48 respectively.

The staff of the Metropolitan Fire Brigade at the end of the year was distributed at 55 land engine, 4 floating, 27 hose cart, and 146 escape stations. The number of fire engines at these stations was 150, corresponding with the number in the previous year; 7 were floating steam engines, 48 land steam engines, and 95 manual engines. The authorised strength of the brigade was 707 of all ranks, including the chief officer, second officer, and the superintendents, having been increased by 113 men. The cases of injury occurring in the brigade during the year were 104, against numbers ranging from 142 to 90 in the five previous years.

Number of Fires and of False Alarms attended during the Eleven Years 1879–89, and in each Month of 1889.

Years and Months.	Total Calls.	False Alarms and Chimneys.	Fires.				
			Serious.	Slight.	Total.	Per-centages.	
						Serious.	Slight.
1879	1949	231	159	1559	1718	9·3	90·7
1880	2194	323	162	1709	1871	8·7	91·3
1881	2376	385	167	1824	1991	8·4	91·6
1882	2341	415	164	1762	1926	8·5	91·5
1883	2630	486	184	1960	2144	8·6	91·4
1884	2806	517	194	2095	2289	8·5	91·5
1885	2851	581	160	2110	2270	7·0	93·0
1886	2853	704	151	1998	2149	7·1	92·9
1887	3059	696	175	2188	2363	7·4	92·6
1888	2693	705	121	1867	1988	6·1	93·9
1889	3131	793	153	2185	2338	6·5	93·5
1889. January	284	70	21	193	214	9·8	90·2
February	234	58	16	160	176	9·1	90·9
March	256	80	15	161	176	8·5	91·5
April	237	67	10	160	170	5·9	94·1
May	228	53	9	166	175	5·1	94·9
June	234	58	7	169	176	4·0	96·0
July	262	65	13	184	197	6·6	93·4
August	269	61	17	191	208	8·2	91·8
September	290	78	12	200	212	5·7	94·3
October	258	64	11	183	194	5·7	94·3
November	267	70	8	189	197	4·1	95·9
December	312	69	14	229	243	5·8	94·2

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